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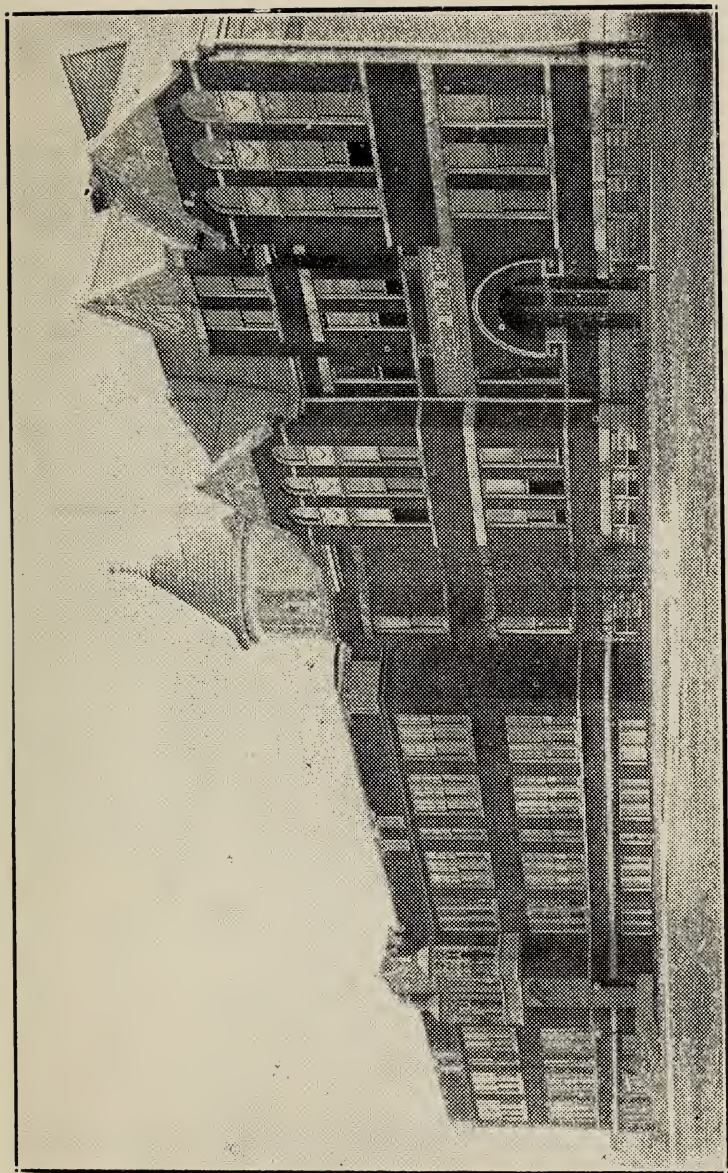
JUN 15 2005











HIGH SCHOOL, HARRISBURG, ILL.  
Where Convention Was Held




FIFTY-THIRD

Annual Convention

OF THE

Illinois  
State Dairymen's  
Association

Held at  
Harrisburg, Illinois,  
January 11, 12 and 13,  
1927



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## HARRISBURG, ILLINOIS

Harrisburg, one of the most progressive cities of Southern Illinois, starting with a population of little over 2000 some twenty-five years ago, now has a population of 12211 by a recent census. Growth has been continuous. The surrounding rich farm lands and two veins of fine coal which underlie them have permitted her permanent prosperity. Her elegant banking houses, fine churches, two modern hospitals, public

library, retail and wholesale stores, ice and cold storage plant, meat packing establishment, her eight modern school buildings, and the attractive homes all attest to her permanent prosperity.

Banking resources of Harrisburg alone are approximately \$6,000,000. Business is always good in Harrisburg because the resources are varied and the consumers save their money to tide over the periods when the work is less abundant. The great number who own their own homes and take pride in their home city accounts for the freedom from serious labor disturbances and acts of violence.

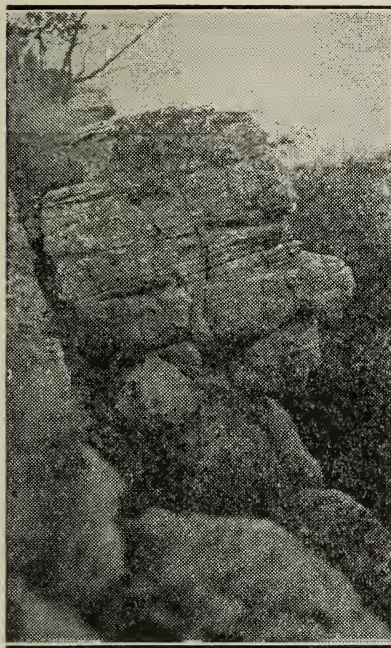
The Harrisburg Township High School has a large modern plant and the largest attendance of any high school in "Egypt," the enrollment being over 750. The city school system of Harrisburg enrolls over 2500 children below the ninth grade.

Saline County has 20 large modern coal mines. Six thousand people are employed and the annual mine pay roll is \$5,000,000. The daily capacity of the mines is 40,000 tons or the equivalent of nine or ten train loads.

Harrisburg is on the Big Four Railroad, 70 miles from Cairo, 90 miles from Vincennes and 314 miles from Chicago. The electric line of the Southern Illinois Railway & Power Co., extends sixteen miles from Eldorado to Carrier Mills, Harrisburg being half way between the two. The Illinois Central and the Louisville & Nashville Railroads connect at Eldorado with St. Louis and points north and east. Bus lines run regularly between Harrisburg and St. Louis and intermediate points.

Five of the \$60,000,000 bond issue state roads radiate from Harrisburg leading to Chicago, St. Louis, Shawneetown, Metropolis, and Elizabethtown and Golconda.

The scenery of Southern Illinois is unsurpassed in the state. The greater part of Saline County lies north of the Saline river and is generally level or undulating. Parts of the three southern townships are in the Ozark Hill region where nature has carved marvels for the pleasure of the tourist or student. The "Great Stone Face of Saline County" is on a high cliff about ten miles southeast of Harrisburg. This cliff, several miles long, stands out overlooking the county and is due to a huge faulting of about 1200 feet. This and other phenomena of equal geological interest afford pleasure to those who understand them or appreciate their grandeur, and inspire awe in those to whom their beauty and scientific interest are not revealed.



OLD STONE FACE





## LETTER OF TRANSMITTAL

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Office of Secretary,  
Illinois State Dairymen's Association,  
Chicago, Ill., 1927.

To His Excellency, Len Small, Governor of the State of  
Illinois:

I have the honor to submit the official report of the  
Illinois State Dairymen's Association, containing the ad-  
dresses, papers and discussions at its fifty-second annual  
meeting, held at Harrisburg, Illinois, January 11, 12 and  
13, 1927.

Respectfully,

GEO. CAVEN, Secretary.

## LIST OF OFFICERS

---

President—

W. S. O'HAIR, Paris, Ill.

Vice-President—

S. J. STANARD, Springfield, Ill.

Secretary—

GEORGE CAVEN, Chicago.

Treasurer—

CHARLES FOSS, Freeport.

Directors—

W. S. O'HAIR, Paris, Ill.

S. J. STANARD, Springfield, Ill.

JOHN STELLE, McLeansboro, Ill.

T. P. SMITH, Danville, Ill.

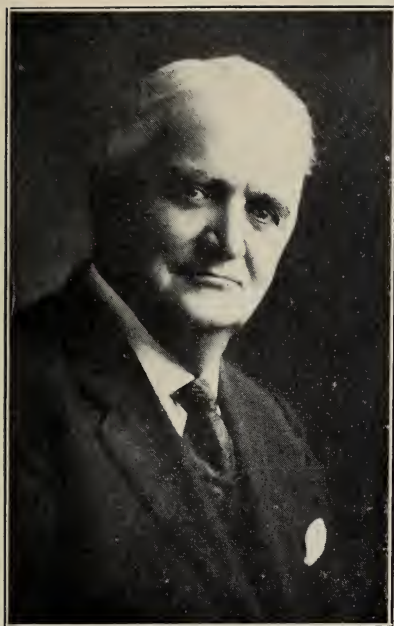
C. M. FILSOM, Salem, Ill.

J. R. PHILLIPS, Sesser, Ill.

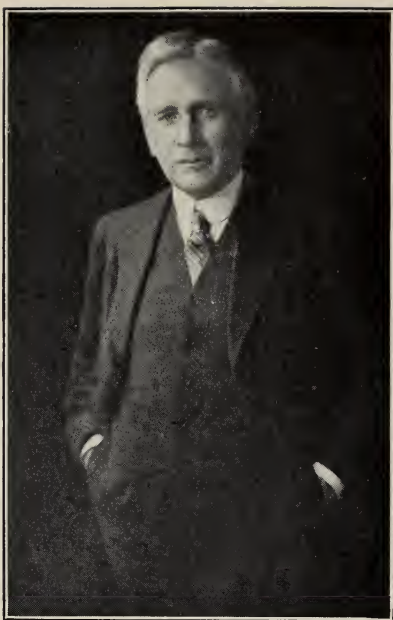
CHAS. FOSS, Orangeville, Ill.

HARLAN SEE, Paris, Ill.

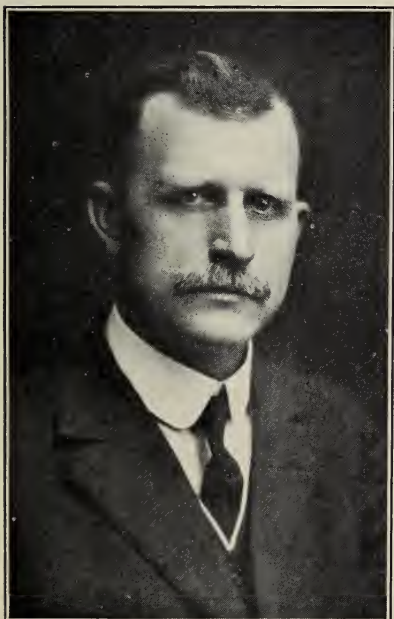
GEORGE CAVEN, Glencoe, Ill.



W. S. O'HAIR, President  
Paris, Ill.



GEO. CAVEN, Secretary  
Glencoe, Ill.



CHAS. FOSS, Treasurer  
Orangeville, Ill.



S. J. STANARD, Vice-President  
Springfield, Ill.



# CONSTITUTION AND BY-LAWS OF THE ILLINOIS STATE DAIRYMEN'S ASSOCIATION

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## **Name and Purpose**

Section 1. The name of this Association shall be the "Illinois State Dairymen's Association." Its general purposes shall be to promote the dairy interests of the State of Illinois and to disseminate knowledge concerning the same, to bring about more economical production of dairy products, the production of a better quality of dairy products, and to increase the consumption of dairy products.

## **Membership**

Section 2. Any person who is a resident of the State of Illinois and who shall pay into the treasury of the association the sum of one dollar, shall be a member of the association until the first day of the opening of the next annual convention. Any person who is a resident of the State of Illinois and who shall pay into the treasury of the association the sum of four dollars shall be a member of the association for a period of five years from the first day of January preceding the date of said payment. Any person who is a resident of the State of Illinois and who shall pay into the treasury of the association the sum of ten dollars shall be a life member of the association and shall be exempt from payment of any dues with the exception of special assessments, which may be made by the Board of Directors on all members, which assessments shall not total more than fifty cents per member in any one year.

Honorary members may be elected by vote at any annual meeting of the association in recognition of services rendered to the dairy interests of the state, and such members shall be entitled to all privileges of membership with the exception of voting for officers, and shall be exempt from all dues and assessments.

### **Management**

Section 3. The full management of the affairs of the association shall be in the hands of the Board of Directors, which shall consist of a president, vice-president and five directors. Four members of the Board of Directors shall constitute a quorum to do business.

The Board of Directors may adopt such rules and regulations as they shall deem advisable for the government and conduct of the business of the association and may appoint such committees as they shall consider desirable.

They shall also make a biennial report to the Governor of the state of the expenditures of the moneys appropriated to the association and arrange the program and order of business for the same.

### **Elective Officers**

Section 4. The president, vice-president and Board of Directors shall be elected by ballot at the first annual meeting of the association. Only five-year or life members shall be eligible for election to the elective offices or Board of Directors. A plurality vote shall elect.

The elective officers and Board of Directors shall take office immediately following their election and shall hold office for one year or until relieved by successors who have been duly elected and qualified.

Any vacancy which may occur among the Board of Directors or officers may be filled by the Board of Directors for the unexpired term.

### **Appointive Officers**

Section 5. The Board of Directors shall appoint the secretary and treasurer who shall take office upon the first day of July following their appointment and shall hold office until relieved by duly appointed and qualified successors.



### **Headquarters**

Section 6. The headquarters of this Association shall be where the secretary has his place of business.

### **Annual Meeting**

Section 7. The association shall hold its annual meeting at such place and time as shall be determined by the Board of Directors, not less than thirty days in advance.

### **Duties of the President**

Section 8. The duties of the president shall be to preside at the meetings of the association and of the Board of Directors. It shall be his duty, together with the secretary, to arrange a program and the order of business for each regular annual meeting of the association and of each meeting of the Board of Directors and upon the request of five members of the association, it shall be his duty to call special meetings of the Board of Directors, or he may call meetings at such times as he deems advisable.

During the first day of the annual meeting of the association, the president shall appoint in open meeting a committee consisting of three members of the association, which committee shall place before the convention nominations for officers and directors of the association for the ensuing year, their report to be made not less than three hours after their appointment. The president shall at the time of the appointment of the nominating committee indicate in open meeting when the election of officers shall take place.

The president may, at this meeting, appoint whatever other committees that to him may seem advisable.

The president shall be a member ex-officio of all committees either appointed by him or by the Board of Directors, with the exception of the nominating committee.

### **Duties of the Vice-President**

Section 9. In the absence of the president, his duties shall devolve upon the vice-president.

### **Duties of the Secretary**

Section 10. The secretary shall record the proceedings of the association and of the Board of Directors. He shall keep a list of the members, collect all the moneys due the association and shall record the amount with the name and postoffice address of the person so paying, in a book to be kept for that purpose. He shall pay over all moneys to the treasurer, taking his receipt therefor. It shall also be his duty to assist in making the program for the annual meeting and at the close of the said meeting compile and prepare for publication all papers, essays, discussions and other matter worthy of publication and cause to be published and distributed to members at the earliest day possible and shall perform all such other duties pertaining to his office as shall be necessary. Any compensation for the services of the secretary shall be established by the Board of Directors.

### **Duties of the Treasurer**

Section 11. The treasurer shall before entering upon the duties of his office, give good and sufficient bond to the directors of the association with one or more sureties to be approved by the Board of Directors, which bond shall be conditioned for the faithful performance of the duties of his office. He shall account to the association for all moneys received by him by virtue of said office and pay over the same as he shall be directed by the Board of Directors. No moneys shall be paid out by the treasurer except upon order signed by the president and countersigned by the secretary. The books or accounts of the treasurer shall at all times be open to the inspection of the members of the Board of Directors, and he shall at the expiration of his term of office, make a report to the association of the condition of its finances and deliver to his successor the books of account, together with all moneys and other property of the association in his possession or custody. The treasurer's bonding fee, if there be any, shall be paid by the association.

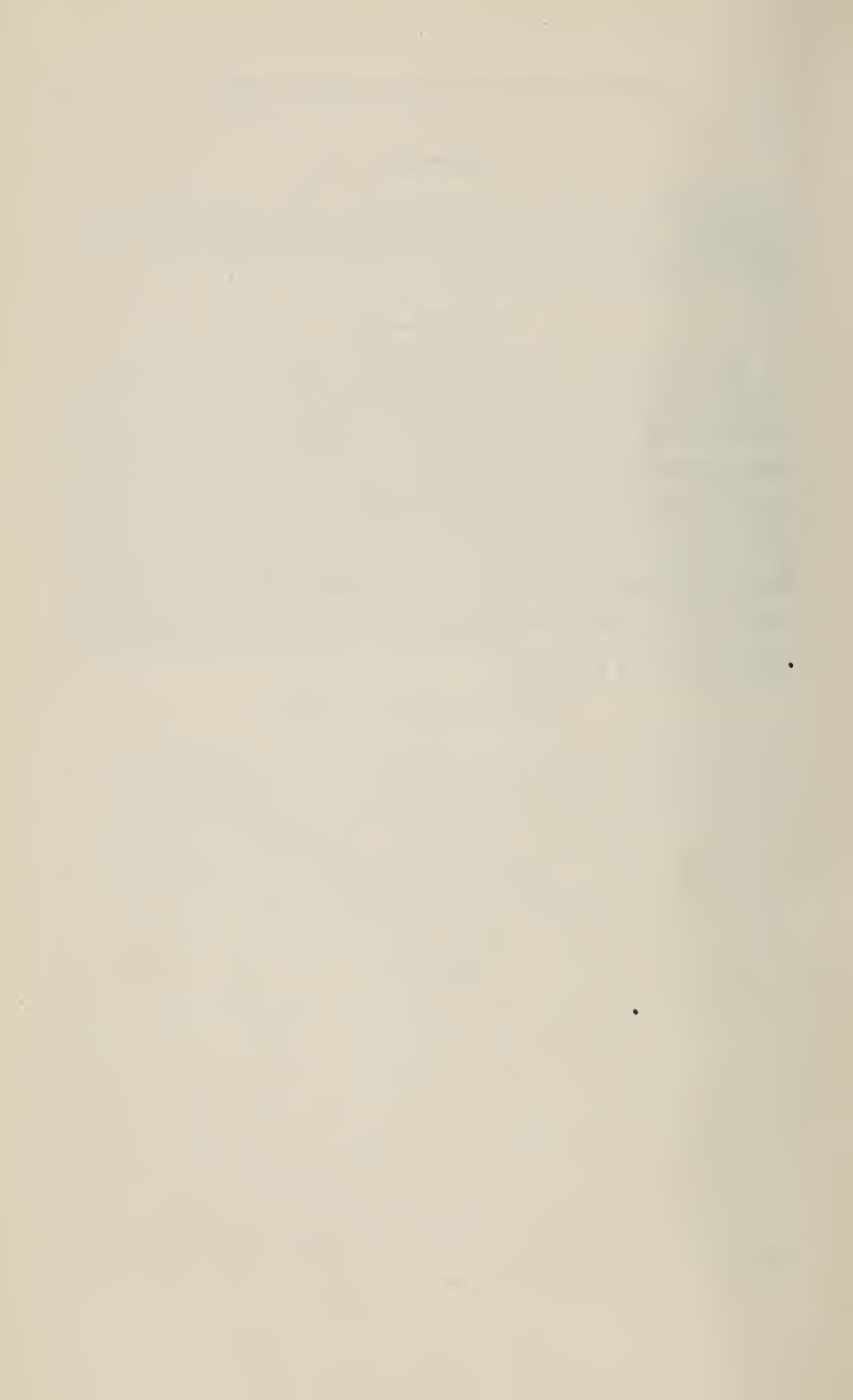


### **Quorum**

Section 12. Seven members of the association shall constitute a quorum for the transaction of business, but a lesser number may adjourn.

### **Amendments**

Section 13. This constitution and by-laws may be amended at any annual meeting by a vote of not less than two-thirds of the members present. Notice of the proposed amendment or amendments must be given in writing and at a public meeting of the association at least one day before any election can be taken thereon. This constitution and by-laws may also be amended by unanimous vote of the Board of Directors present at a meeting called for that purpose, written notice stating purpose of meeting having been sent to all members of the Board not less than ten days preceding date of meeting.



## FIFTY-THIRD ANNUAL CONVENTION ILLINOIS STATE DAIRYMEN'S ASSOCIATION

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Holding a dairy convention in a section of the state notable for coal production appeared doubtful when suggested, but the request for the meeting was so strongly backed by the business men of Harrisburg, that doubt was removed. And the business men made good on all their representations with the result that the Fifty-third Annual Convention of the State Dairy Association was a remarkable success and no doubt will bring to that section of the state the benefits expected from such a meeting.

The convention was held Tuesday, Wednesday and Thursday, Jan. 11, 12 and 13, 1927. It opened Tuesday with a parade of dairy cattle in the exhibit, the parade being headed by the Junior High School band. Following the parade Mayor Patterson gave an address of welcome to which Chas. Foss of Freeport, Ill., a director of the association, responded.

Response to the Address of Welcome by the Mayor of Harrisburg to the Illinois State Dairy Meeting, January 11, 1927, by Chas. Foss.

I am sure that every visiting member of the Illinois State Dairymen's association highly appreciates the hearty welcome which has just been extended to us by Honorable Mr. Patterson, mayor of your city and I feel highly honored to be called upon to respond to this address.

The membership of the Illinois State Dairymen's Association is composed of dairy farmers and others who are in any way interested in dairy farming, either as manufacturers of dairy products or dairy utensils as well as members of the faculty of our state university and state department of agriculture at Springfield.

The object of this association is to bring to the dairy farmer the latest and best information that is available on the subject of economic milk production. While it has

always been the aim of the directors of this association to prepare a good program, I am happy to say that the program prepared for the next three days of this convention is one of the best. Every man that is to appear on the program is an expert in his line and will bring you first hand information on the subject of economic milk production.

### **Dairy Farming Builds up the Soil**

The history of Agriculture in all civilized nations shows that grain farming is usually the first type of farming developed. The next stage in the history of agriculture is a decline in the fertility of the soil and in grain production—the result of long cropping. This results in greater attention in livestock of all kind. As a rule, the first cattle industry of any magnitude is that of beef raising, which is followed by a gradual change to dairy farming combined with more or less general farming. When this stage is reached the fertility of the soil is maintained and may be greatly increased if the best methods of dairy farming are practiced.

The dairy districts of Europe have gone through these stages; They were at one time chiefly grain producing regions, and later engaged in beef production.

A considerable portion of the United States, especially the eastern part, has already passed through these successive stages. This is true of New York, Pennsylvania, Ohio, Wisconsin and Michigan, as well as northern Illinois. In southern Illinois you have been practicing grain farming until the virgin fertility of your soil has been very much depleted. You are now just beginning to turn your attention to the dairy cow to arrest the further depletion of your soils and if possible to restore the fertility of your soil that was depleted by grain farming. I want to say to you this afternoon that the dairy cow is equal to the task if you farmers will do your part and give her a chance.

The most practicable means of keeping up the fertility of the soil is the use of farm manure, made possible by the keeping of a liberal number of livestock. Man has used dairy products as far back as history records and recent dis-



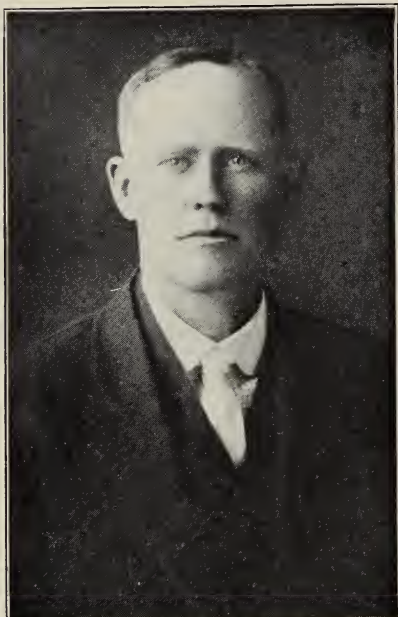
**T. P. SMITH**  
Danville, Ill.



**C. M. FILSON**  
Salem, Ill.



**JOHN STELLE**  
McLeansboro, Ill.



**J. R. PHILLIPS**  
Sesser, Ill.





coveries by Dr. McCullom, as well as other scientists, that the vitamins so essential to the proper nourishment and development of the growing child are found in milk and dairy products only. These facts are now taught the mothers in the homes as well as to our high school pupils the result of which has been that the demand for milk and dairy products of all kinds has increased much faster than the increase in production of dairy products.

These facts furnish a firm foundation for the faith of the dairy farmer in the permanent character of his industry not only so far as soil fertility is concerned but for a remunerative market for his product as well. Because of better market for dairy products the dairy farmer has not suffered nearly as much financial loss in the depression through which we are now passing as has the grain farmer. There has been no surplus of dairy products in this country. The demand has always equalled the supply and with the educational campaign now conducted all over this land relative to the necessity of dairy products in the diet of growing children as well as grown up people it is going to be a long time before the day comes when we will have a surplus.

It is a well established fact that it is possible to maintain soil fertility where grain crops are sold from the farm provided as much fertility is bought in the form of commercial fertilizer or grown with legumes as is removed by the crops. This, however, is seldom if ever done. So far, in our history, grain selling has meant selling soil fertility from our farms that had been stored up in the past ages. On the other hand wherever intensive dairy farming has been practiced for some time soil fertility has not only been maintained but has been increased. This is explained by the fact that for every ton of corn sold from the farm \$8.38 worth of fertility is removed; For every ton of clover or alfalfa hay that is sold nearly \$11.00 worth of fertility is removed. In a ton of wheat \$9.33 is removed. A ton of wheat bran removes \$15.28 worth of fertility; a ton of linseed meal \$26.20 and a ton of cotton seed meal removes nearly \$31.00 worth of fertility.

On the other hand dairy products take very little fertility from the farm in proportion to their selling value. A ton of milk removes \$2.49 worth of fertility while a ton of butter removes only \$.64 worth. But this does not tell all the story. The dairy farmer usually is a purchaser rather than a seller of grain and by this means adds constantly to the fertility of the farm. On a well managed dairy farm legumes are grown and it is usually the case that high protein by-products such as linseed meal, cotton seed meal or bran are purchased to balance home grown grains. Not only do these by-products furnish the needed protein to balance the ration but also furnish a large amount of fertility for the farm. The fact is that cottonseed meal at present prices can be purchased for just about its fertilizer value.

The special value of the dairy cow as a domestic animal arises from her ability to consume and digest large amounts of roughage and convert it into milk and meat suitable for the digestion of man.

The hog exceeds all other animals in regard to the amount of meat produced from a given amount of feed but it can only use a limited amount of roughage. It must depend largely on grain for its food.

Sheep can utilize roughage but other factors prevent the keeping of sufficient numbers to use the immense quantities of roughage available from the growing of crops.

The production of large amounts of roughage is necessary in connection with the growing of crops and we must depend largely upon the cow and the steer to convert this roughage into a form suitable for human food. The cow is a much more economical producer of human food than is the steer.

Professor Eckles has found in comparing the milk production of a Holstein cow with a steer weighing 1250 pounds that the 18,405 pounds of milk, the production of this particular cow in a year, contained 2218 pounds of dry matter while that of the steer contained 548 pounds. The milk produced by the cow contained more than four times as much dry matter as that of the steer. The dry matter of the cow's milk is all edible and digestible while



that of the steer contained hair, hoof, the digestible organs, bones and lungs much of which is not edible. Professor Eckles also compared the milk produced by three ordinary Jersey cows; three Holsteins and three Ayrshires and found that the average production of these nine cows contained nearly twice as much dry matter as did that of the 1250 steer. It took the steer two years to grow this carcass and then had to be killed to make it available as food while the dairy cow was ready to repeat her performance for six or eight more years.

There is another advantage to dairy farming which appeals to the farmer—especially to the farmer with limited capital—and that is the quickness and certainty of the returns. This is not true of grain farming or even of live-stock farming. In localities where dairying has been generally followed it is usually the case that large barns and commodious homes many of which have all modern conveniences are found on farms whose soil is in a high state of cultivation.

I do not want any one here this afternoon to get the idea that all that is necessary to succeed in the dairy business is to get some cows; turn them out in the corn field and let them hustle for a living. You will never succeed if you proceed in this manner.

Any one engaged in milking cows on a commercial scale does so with the intention of making money at the dairy business. No one wants to keep cows at a loss or for pleasure. While the possibilities for success in the dairy business are better than in grain farming it is true, however, that not every one engaged in dairying is making money at it.

There are three essentials to successful dairying, without any one of these you will not be likely to succeed. The first essential to economic milk production and profits in the dairy business is good cows that can take the crops we grow on our farms and convert them into milk and butter fat at a profit. The second essential is to feed the cow the right kind of feed and give her the proper care so that she can produce milk economically, and the third is to grow the

crops on the farm that are best suited to feed the dairy cow. These essentials cover the entire field of dairy farming. The more we study and supply them the better success we will have.

The entire program of the three days of this convention is based on these three essentials. Every speaker on the program will speak on one or more of these essentials. This afternoon Professor Rhode will tell us how to select the good cow. He will point out some of the leading characteristics so essential to a good dairy cow.

Professor Frazer will tell you something about sweet clover. If you cannot grow alfalfa hay in southern Illinois you can grow sweet clover for pasture and soy beans for hay.

Professor Morrison of Wisconsin will tell you not only how to feed the dairy cow a balanced ration but also how to feed an economical ration as well. He is a recognized authority on feeding farm animals.

Professor Hooper will tell you something about breeding the dairy cow, Professor Caldwell will tell you how to feed the dairy calf so that it will develop into a good dairy cow.

This program would not be complete if Professor R. E. Muckelroy of the Southern Illinois Normal University at Carbondale did not appear on it. Professor Muckelroy is your fellow citizen. He grew up in southern Illinois and I am safe in saying that he understands the needs of southern Illinois soils as well as the needs of the southern Illinois farmers better than any other college man. Not only has he been teaching the theory of soil improvement and better farming to the boys that have come under his instruction but he has carried these theories out in actual practice on his own farm right here in southern Illinois. I am sure he will have a message for you that will be worth listening to.

The sole aim in bringing this convention to Harrisburg as well as the aim of the committee in preparing this program has been to help the farmers of southern Illinois solve the problem of soil fertility by helping you get started in the dairy business.

Gentlemen this is your convention, use it. Get all the good out of it you can. Be free to ask questions of any of the speakers. I am sure they will be glad to answer them. Let us make this one of the best conventions ever held in southern Illinois or anywhere else for that matter.

Again I thank you for the cordial welcome which you have just extended to us.

Prof. C. H. Rhode of University of Illinois took charge of the remaining part of the program for the afternoon which consisted of individual and team judging of dairy cattle. Prof. Rhode first gave a lecture on cattle judging, pointing out from cattle taken from the exhibit the points that distinguish a dairy animal. Most of the individuals who entered in the judging contest and the teams entered had had some experience in judging. There were nine teams representing high schools as follows:

METROPOLIS: Boyd Harper, Noah Quint, and William Wheeler.

MARION: Lloyd Sparks, Earl Walker and Henry Phillips.

MOUNT VERNON: Albert Warner, Kelly Harlow and Clarence Greer.

HERRIN: Earl Legan, Hubert Bloodworth and Walter Bennett.

EQUALITY: Clyde Monday, Louis Mitchell and Roy McDaniel.

ELDORADO: Warner Glascock, Charles Stinson and Jesse Hall.

SESSER: Harry Brown, Joe Klyn.

FLORA: Elmer Colclasure, Duncan Dow and Elsworth Robertson.

MURPHYSBORO: Alva Culley, Earl McEntire, Walter Thompson.

A team composed of six members of Saline County Calf clubs also was entered in the judging.

HARRISBURG: Calf Club team, Ivalene Thomas, Fred Patterson, Tom Patterson, Team No. 1. Birtus Holland, Joe Hatcher, Nola Hatcher, Team No. 2.

The placings by points in the judging contest were as follows:

High schools: Flora, 527; Metropolis, 515; Marion, 506; Equality, 504; Eldorado, 498; Herrin, 482; Sesser, 475; Murphysboro, 462; Mt. Vernon, 434; Harrisburg Calf Club team number 2, 460; team composed of Nola Hatcher, Birtus Holland, Joe Hatcher, Harrisburg Calf Club team number 1, 438; team composed of Tom Patterson, Fred Patterson, Ivalene Thomas.

The high individual scores were as follows: Ellsworth Robertson, Flora, 195; Jesse Hall, Eldorado, 185; Earl Legan, Herrin, 183; Earl McEntire, Murphysboro, 180; Henry Phillips, Marion, 179; Louis Mitchell, Equality, 177.

### Winners of Calves

The association had offered dairy calves as prizes in a membership campaign and the six highest who won these prizes are: Wanda Ivalene Thomas, Harrisburg, who enrolled the most members and won a bull and a heifer; Champ Davis, Harrisburg, second; Harlan Austin Swango, Paris, third; Herman Thomas, Georgetown, fourth; Edw. Timpner, Jr., Pinckneyville, fifth and A. J. Andrews, Flora, sixth. Each received a registered purebred heifer of the dairy breed they prefer. As a result of this membership campaign, the Illinois Dairymen's Association now totals approximately 2,000 members, ranking foremost among the dairy associations in the United States.

## CATTLE EXHIBIT PRIZE WINNERS

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The following are the winners in the cattle exhibits in connection with the dairy convention:

**For Any Dairy Breed**—For the best dairy calf or heifer club under two-year-old, not less than three animals to be shown:

1st prize—\$40.00 Tom Patterson, Jr.; Fred Patterson, Jr., and Frank Patterson.

2nd Prize—\$20.00 Howard James, Harold and Dick Carpenter.

3rd Prize—\$10.00 Nola Hatcher, Joe Hatcher and Roy Thornsberry.

**Club Cows**—2 years old and over, owned by Club members:

1st Prize—\$15.00 Mary Louise James.

2nd Prize—\$10.00 Nola Hatcher.

3rd Prize—\$7.00 Frank Patterson.

4th Prize—\$5.00 Emmette Foster.

**Club Heifers**—One year old and under two:

1st Prize—\$1.00 Tom Patterson, Jr.

2nd Prize—\$7.00 Roy Thornberry.

3rd Prize—\$5.00 Fred Patterson, Jr.

4th Prize—\$3.00 Howard James.

**Club Calf**—Under one year old.

1st Prize—\$10.00 Harold James.

2nd Prize—Mary Louise James.

3rd Prize—\$5.00 Roy Thornberry.

4th Prize—\$3.00 Kenneth Rice.

**Open classes to all exhibitors for State Cattle in Jersey, Guernsey, Holstein and Ayrshire breeds owned by one person or firm:**

**Jersey Bull**—2 years and over:

1st Prize—\$10.00 J. R. Phillips.

**Guernsey Bull**—2 years and over:

1st Prize—\$10.00 Ernest Higgins and Son.



**Holstein Bull**—2 years and over:

1st Prize—\$10.00 E. Guy Pixley.

**Ayshire Bull**—2 years and over:

1st Prize—\$10.00 Walter Baldwin.

2nd Prize—\$5.00 Fred Patterson.

**Jersey Bull**—1 year and under two:

1st Prize—\$10.00 J. R. Phillips.

-- -- **Ayrshire Bull**—1 year and under two:

1st Prize—\$10.00 Ernest Higgins and Son.

2nd Prize—\$5.00 W. W. Riegel.

**Ayrshire Bull**—2 years and over:

1st Prize—\$10.00 Walter Baldwin.

2nd Prize—\$5.00 Walter Baldwin.

-- -- -- **Jersey Bull**—Under 1 year old:

1st Prize—\$10.00 J. R. Phillips.

2nd Prize—\$5.00 R. L. Gates.

**Guernsey Bull**—Under 1 year old:

1st Prize—\$10.00 Ernest Higgins and Son.

2nd Prize—\$5.00 Roy Thornberry.

**Holstein Bull**—Under 1 year old:**Ayrshire Bull**—Under 1 year old:

1st Prize—\$10.00 Walter Baldwin.

2nd Prize—\$5.00 Walter Baldwin.

**Jersey Cow**—2 years old and over:

1st Prize—\$10.00 J. R. Phillips.

**Guernsey Cow**—2 years and over:

1st Prize—\$10.00 Ernest Higgins and Son.

2nd Prize—\$5.00 Mary Louise James.

**Holstein Cow**—2 years and over:

1st Prize—\$10.00 E. Guy Pixley.

**Ayrshire Cow**—2 years and over:

1st Prize—\$10.00 Walter Baldwin.

2nd Prize—\$5.00 Walter Baldwin.

**Jersey Heifer**—1 year and under two:

1st Prize—\$10.00 J. R. Phillips.

2nd Prize—\$5.00 J. R. Phillips.

**Guernsey Heifer**—1 year old and under two:

1st Prize—\$10.00 Ernest Higgins and Son.

2nd Prize—\$5.00 Fred Patterson.

**Holstein Heifer**—1 year old and under two:  
1st Prize—\$10.00 E. Guy Pixley.

**Ayrshire Heifer**—1 year old and under two:  
1st Prize—\$10.00 Walter Baldwin.  
2nd Prize—\$5.00 Walter Baldwin.

**Jersey Heifer Calf**—under 1 year old:  
1st Prize—\$10.00 R. L. Gates.  
2nd Prize—\$5.00 R. L. Gates.

**Guernsey Heifer Calf**—under 1 year old:  
1st Prize—\$10.00 Harold James.

**Holstein Heifer Calf**—under 1 year old:  
1st Prize—\$10.00 E. Guy Pixley.

**Ayrshire Heifer Calf**—under 1 year old:  
1st Prize—\$10.00 Walter Baldwin.  
2nd Prize—\$5.00 Walter Baldwin.

### AGE HERD

**BULL, 2 years old and over; cow 2 years old and over; cow,  
1 year old; heifer calf:**

**Jersey**—1st Prize—\$12.50 J. R. Phillips.

**Guernsey**—1st Prize—\$12.50 Ernest Higgins and Son.

**Holstein**—1st Prize—\$12.50 E. Guy Pixley.

**Ayrshire**—1st Prize—\$12.50 Walter Baldwin.  
2nd Prize—\$7.50 Walter Baldwin.

### CALF HERD

**One bull and two heifers, under one year old:**

**Jersey**—\$10.00 J. R. Phillips.  
2nd Prize—\$7.50 J. R. Phillips.

**Guernsey**—1st Prize—\$12.50 Ernest Higgins and Son.  
2nd Prize—\$7.50 Roy Thornberry, Harold James and  
Mary Louise James.

**Ayrshire**—1st Prize—\$12.50 Walter Baldwin.  
2nd Prize—\$7.50 Walter Baldwin.

**JUNIOR CHAMPION BULL**

**Jersey**—\$1.00 J. R. Phillips.

**Guernsey Bull**—\$10.00 Ernest Higgins and Son.

**Holstein**—\$10.00 E. Guy Pixley.

**Ayrshire**—\$10.00 Walter Baldwin.

**SENIOR CHAMPION COW**

**Jersey**—\$10.00 J. R. Phillips.

**Guernsey**—\$10.00 Ernest Higgins and Son.

**Holstein**—\$10.00 E. Guy Pixley.

**Ayrshire**—\$10.00 Walter Baldwin.

**JUNIOR CHAMPION COW**

**Jersey**—\$10.00 J. R. Phillips.

**Guernsey**—\$10.00 Ernest Higgins and Son.

**Holstein**—\$10.00 E. Guy Pixley.

**Ayrshire**—\$10.00 Walter Baldwin.





**TUESDAY, JANUARY 11th**

The feature Tuesday evening was a minstrel show given by local talent under the direction of Mrs. C. A. Taylor. Some of the characters were:

Aunt Dilly—Mrs. C. A. Taylor.

Lilly Vilet—Mrs. A. H. Favreau.

Ophelia—Mrs. T. D. Gregg.

Sis Des Demonia—Miss Edith Horton.

Cleopatra—Mrs. Harry Taylor.

Aunt Ca'line—Mrs. W. B. Hamilton.

Uncle Tobe—Taylor Ferguson.

Sambo—Gardner Bride.

Ebenezer—J. Roy Staiger.

Rastus—Harry Reed.

Peruna—Mrs. D. L. Barthel.

Aunt Casey—Mrs. P. W. Sherman.

• Sarsparilly—Mrs. Ed Gaskins.

Eccelesiaste—A. O. Munday.

anuary—Mrs. Gertrude Hetherington.

Abe Lincoln—Bob Burnett.

Thomas Jefferson—Charles E. Taylor.

Alabama—Mrs. Ethel Thompson.

Pearline—Mrs. Louie Davenport.

Isabell—Mrs. C. F. Elder.

Abalaster—Mrs. Lelia Johnson.

Pianist—Mrs. D. A. Lehman.

Florian Slapley—W. B. Hamilton.

Evans S. Chew—C. A. Taylor.

Jack Johnson—Alex Favreau.

Pickaninnies—Lewis Heister, Marion Webber Whitley, Joe Ferrell, Roy Dorris, Frederick McKenzie, Phillip Durham, Juanita Hudgens, Fern Johnson, Jane Rose Whitley, Margaret Dee Ferguson, Bonie Lee Nolen and Jane Lehman.

Director—Mrs. C. A. Taylor.

WEDNESDAY, JANUARY 12th

**FEED PRODUCTION AND CROP ROTATION  
ON THE DAIRY FARM**

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**Prof. Wilbur J. Fraser, University of Illinois**

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Dairy farming is really a business of two departments—the dairy cattle and the farm crops. A dairyman must be as good a farmer as he is a dairyman, for it does him no good to have good cows and know the proper feeds to give them unless he has an economical supply of these feeds in sufficient quantity to allow him to produce milk at a profit. Many good dairymen do not lay enough stress upon the matter of feed production and crop rotation, and as a result, spend the portion of their receipts which should be profit, for feed, thus getting nowhere.

A dairy rotation must be planned with certain definite things in mind, and the dairyman must realize that his problem in cropping is to properly feed his cows. Too many dairymen at present grow practically the same crops that their grain farmer neighbors do, and as a result their cows either suffer from lack of feed or must be fed purchased feed to make up the deficiency, whether it be a lack of protein, short pasture, or what not.

The good dairy rotation must do three things:

**One**—Supply the proper quantity and quality of feeds to keep the dairy cows producing at their maximum throughout the year, which means that the dairy is then making its maximum profit.

**Two**—Provide for the most profitable utilization of the land by growing the most profitable crops and at the same time maintaining and increasing soil humus and nitrogen.

**Three**—Provide for the distribution of labor so that the

labor available can be kept profitably employed throughout the year.

It is indeed fortunate that over a vast majority of the dairy districts of the United States, the demand of the dairy cow for high protein hay, the necessity for the use of the most profitable crops on the land, and the need of the soil for nitrogen and humus all dovetail together so well where an alfalfa hay—sweet clover pasture—corn silage program, as will be discussed later, is followed.

### **Must See it Through**

A man should not enter into a rotation system lightly, but with the determination to see it through, for a rotation is a long time proposition, and a man must have the foresight to see its advantages and then work out the practical difficulties which arise. No man can foresee the future, but if his business is founded on correct principles, he need not fear it.

### **What a Good Rotation Will Do for the Cows**

The rotation meets the requirements of the cows in the winter by providing the proper amounts of good roughage and grain year after year. Good alfalfa hay and corn silage form the basis for a most, or perhaps I should say, **the** most economical ration. In fact, with the larger breeds giving up to 20 pounds of 3.5% milk a day, and with the smaller breeds giving up to 12 pounds of 5% milk a day, these two feeds are all that are necessary if fed to the cows' capacity. Beyond these rates of production, **home-grown grains** can be added according to the cows' production, because alfalfa provides such a large amount of high class protein.

All this means that instead of paying out large amounts of money for feed every year, the dairyman will be supplying all his own feed and will no longer be carrying the burden of cash outlay for feed every year. Every dairyman can figure for himself what a saving this can mean to him.

Sweet clover pasture is six months pasture, instead of only a two or three months pasture. The second year crop can be pastured earlier in the spring than bluegrass and will carry a cow to each  $\frac{3}{4}$  acre. In the fall the first year sweet clover in the grain stubble takes over the task of keeping the cows supplied with an abundance of pasturage of the very best quality. Where permanent pasture is available on land that can be used for no other purpose, its carrying capacity can be greatly increased by sowing and disking in sweet clover two years in succession, as sweet clover reseeds itself only every other year. With the sweet clover in the small grain stubble, this will greatly shorten or eliminate the summer feeding to supplement poor pastures.

### **A Good Rotation Means Efficient Use of Land**

Land must be planted to the most profitable crops to make a large return to the operator. Corn for silage is found on most dairy farms as its value is well known and the crop easy to grow. The crop which should be its inseparable companion is found more seldom, and that is alfalfa, which produces twice as much tonnage per acre as the other legume hay crops and almost three times as much protein. Every acre planted to alfalfa instead of the other hay crops, releases an acre of land to be used for other cash crops. In this way, a farmer can achieve the same result by growing fifteen acres of alfalfa to supply thirty cows as if he purchased or rented fifteen more acres of land. However, by substituting alfalfa, he does not have to work the additional acres nor pay taxes on them. Other legumes may be grown while the land is being prepared for alfalfa, but they should be considered only as stepping stones to the more profitable alfalfa, which every farmer should make every effort to grow.

Pasture on tillable land has always been considered an expensive crop, but pasture is a necessity for dairy cows, though looked upon as a necessary evil in the past. Sweet clover has changed all this by making the land produce six months pasture instead of two or three, while it cuts

the necessary area of pasturage in half. Where it takes an acre and a half of bluegrass, three quarters of an acre of sweet clover will do a much better job of supplying a cow with all the green feed she wants, and cows never produce better than on good pasture. Where thirty cows are kept twenty-two and a half acres of sweet clover will do the job formerly requiring forty-five acres, and will not require supplementary summer feeding of hay and silage as when bluegrass dries up in July and August.

Under the system outlined above, a legume will be on the land used to support the dairy two out of three years. Instead of robbing posterity, this rotation stores up fertility for its use, since 75% of the nitrogen may be recovered in the manure and returned to the land while a large amount will be left in the roots and refuse in the field, which also supply humus.

### **Rotation a Means of Controlling Plant Disease**

A rotation also helps to control plant diseases and insects. Corn root rot is an example of such a disease, while the corn root louse is held in check the same way. But what may prove to be the greatest advantage of a good rotation such as has been cited is that it can be used to control the European corn borer which is so rapidly sweeping westward across the continent and is already in Illinois. One of the very best controls so far discovered has been to put all the corn grown in the silo, for the ensiling process kills the borer while the borer does not harm the legumes. The dairyman can continue his business about as before, while it looks as if the cash corn growers would be about ruined for a time.

### **Rotation Means Better Labor Distribution and More Diversification**

Labor is utilized to better advantage under a good rotation, for the labor requirements on different crops come at different times, thus keeping labor fully employed and reducing the strain of peak loads which occur where the



cropping system is not properly diversified. Knowing just what crops are to be grown next year, the farmer can tell what work can be done to prepare for them during the slack seasons of the year, while in the spring one task follows another in orderly fashion.

By diversifying his cropping system, the farmer greatly increases his financial stability. The old saying, "Don't put all your eggs in one basket," still holds good and by growing a number of crops as well as the more certain crops such as alfalfa, a man can insure the regularity of his income.

The rotation must be planned with a long time view as to what combinations of crops and what size dairy will be most profitable over a series of years. Each farmer knows about how much labor he has available and about the number of animals he wishes to keep. Besides the cows, the young stock, the work horses, and other kinds of stock must be considered in laying out the farm. In order to be successful a rotation should be planned for a definite number of animals so that they will at all times be assured plenty of feed, for production comes after the animal is maintained and to keep producing at top pitch, the cow must have all the feed she needs. An abundance of feed insures dairy profits.

The fields should be laid out so as to be of about equal size in order that nearly the same amount of feed will be available each year. Plenty of good roughage is the guide in laying out the farm plan. On 45 bushel corn land, experience has shown that it takes about:

$\frac{1}{2}$  acre of alfalfa per cow.

$\frac{1}{2}$  acre of corn for silage per cow.

$\frac{3}{4}$  acre of sweet clover pasture per cow.

The larger breeds may need a little more but the smaller ones can hardly utilize the full amount. These amounts may vary depending on the section of the country and the fertility of the soil.

The rotation must usually be planned around the pasture. On tillable land, the pasture acreage is so much larger than the alfalfa acreage required that the best plan is



to put them into two rotations with different sized field. A rotation planned in this way might be as follows:  
In one set of fields of the same size:

Alfalfa—corn for silage—small grain, seeded to sweet clover except the year a new alfalfa seeding is established. In another set of larger fields:

Sweet clover pasture—corn—small grain seeded to sweet clover.

The alfalfa may be left down as long as the stand is good. The extra seeding of sweet clover in this part of the rotation is very desirable as it prevents too close pasturing of the sweet clover in the other half of the rotation, which is to be used for pasture the next year. The year alfalfa is changed, the old field may be pastured as it is no longer necessary to preserve the stand.

Another plan is to leave all the fields the same size. If alfalfa is grown over the whole of one of the fields, there may be more than is needed at home and for sale. In this case a part of the field may be plowed up and used for a patch of other crops. Where permanent pasture on untillable land is available, the rotation must be planned in reference to it. Sometimes a buleggrass pasture can be reinforced with sweet clover successfully. Since the amount of permanent pasture varies with every dairy farm, no exact rules can be laid down for the rotation except that it must supply sufficient alfalfa and corn silage for the winter and enough other additional pasturage or other crops to feed the dairy when the permanent pasture dries up. No one rotation fits every farm, but some rotation can be worked out for each farm. Once a farmer really sees the advantage of and wants a rotation, he can generally work one out that is satisfactory.

An acid soil is the only stumbling block in the way of the adoption of a much more profitable rotation on most farms, and this condition continues to exist in spite of the fact that the price of a good cow will buy a carload of limestone which will cover from twelve to twenty-five acres. Take the lower figure of twelve acres and consider that twelve acres of alfalfa will provide high protein hay for

twenty-five cows for the winter, returning the cost of limestone the first year, while the effects of the limestone will last for ten or more years. A tremendous saving in feed cost is available to most dairymen by a change in rotation, and were this idea fully grasped by all dairymen, the railroads would be unable to draw limestone as fast as the dairymen would want to apply it.



**Address of Stillman J. Stanard, Director of Agriculture of Illinois, and Vice-President of the Illinois State Dairymen's Association, Delivered at the 1927 Convention in Harrisburg, Ill.**

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"Mr. President, and friends: I came here with no intention of delivering an address, or of making a set speech, before this body. I just want to talk to you. You can hardly realize what it means to me to have this opportunity to meet with you again, and to see for myself, the good work that is going forward for the advancement of the dairy industry in Illinois.

"The interest manifest in this splendid convention is evidence of the progress dairy farming in Illinois is recording. From the oldest members present, who have witnessed wonderful changes in the methods on the farms throughout this state, to the youngsters who compete in judging dairy cattle—all are striving for a better, more profitable agriculture, in this highly important branch.

"It is difficult to over estimate the importance of the dairy industry in Illinois. Last year, the cows that were milked on the farms in this state, produced in revenue \$101,000,000.00—an important item in the income of the farmers of the state.

"Progress in dairy farming in Illinois, brought about by just such men as you, who are here today, has made dairying our hundred million dollar industry. The improvement of the herds, through selective breeding, and the attention to the all-important details of proper feeding and proper care, and the advanced methods of handling the product of the cow, have helped to increase the extent and the quality of Illinois dairy products.

"Dairying is an important phase of farming, because it is a permanent, self-perpetuating form of farming. When we look back over the history of this nation, as it is linked with the farming activities of our ancestors, we find that the original plan of the pioneers who tilled the soil was

to produce principally grain crops. Within a comparatively few years, the fields of the East, where our forefathers first settled, became depleted. They moved westward, seeking virgin territory, and finding fertile plains and valleys, they established new settlements. As their fields lost their original fertility, the westward movement was renewed.

"In this stage of our advancement, we can no longer move to more promising locations. We must make the best of what we have. And to do this, the proper management of a farm herd, is one of the very best of means whereby we may utilize the soil to produce a livelihood.

"On your program, we find a very fitting slogan—"Boost Dairying in Egypt—Ideally Adapted to the Industry." That is just what we must do to see this section of the state continue to prosper.

"This, the southern end of Illinois, in many ways, is ideally adapted to the dairying industry. No other area of like size, any where on the face of the earth, has as many miles of railroad lines. In addition to these rail facilities, we have, in Illinois, a system of improved, hard-surfaced highways, forming an ever-increasing network, which connects the farm homes with the cities, and, coupled with the railroad lines, brings the markets of the world to the door of the producer.

"There are various agencies that have contributed of their time and talent, toward the advancement of agriculture, and the dairy industry in Illinois. Southern Illinois has appreciated these efforts, and has been ready to accept every opportunity whereby dairy farming may be made more profitable.

"Here, in the heart of Southern Illinois, at Carbondale, in the Southern Illinois Teachers' College, you have, at hand, a school of agriculture. This school, as it has been developed under the able guidance of our good friend Prof. R. E. Muckelroy, has been a great power for good. Its influence has played an important part in the advancement of the farming industry in this section of the state.

"There are countless other factors that have helped to bring Illinois toward the front as a dairy production state.

The results are evident. I can foresee, as the result of this determination to advance, a form of agriculture in Illinois that will mean more in happiness and in the comforts of well-kept, successful rural homes. You, who have never been satisfied to let well enough alone, and to go along in the same old way that our fathers farmed, but who always strive to improve—you are the people who have brought about this advancement, and who will develop, here in Southern Illinois, an even more successful form of farming. The kind, or class of farms I can foresee predominating, is the farm whereon the grain and feed that is produced is grown mainly for consumption on the farm; where the soil has been treated with the essential limes and phosphates, and as a result, fertility is restored through legumes, and by the valuable by-product of the dairy herd. On farms of this class, the dairy cow and the farm hen will reign as queens.

“When that day comes, and with it, the families on the farms of Illinois, more nearly realize a just compensation for their untiring efforts than is now the case, then, the efforts of the various agencies that have served to bring about this advancement, will be fully appreciated. And if, when that time comes, it shall be my lot to be remembered as one who has worked along with you, and has done what he could, all I can say is, that it will be honor enough.

“I thank you.”



## NEW FACTS IN FEEDING DAIRY CATTLE

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**Prof. F. B. Morrison, College of Agriculture,  
University Wisconsin**

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Every farmer naturally wishes to secure as much profit as possible from his farming operations. Yet many fail to appreciate the basic facts which make profits possible.

No fact has been more clearly proved by the many experiments carried on at the various Agricultural Colleges and Experiment Stations than the fact that balanced rations are absolutely necessary for maximum profits in stock farming. This fact has been clearly recognized by scientists ever since the first feeding standard was worked out by a European chemist in 1864.

Since then we have adopted into our every day lives the triumphs of modern scientific inventions—the telephone, the electric light, the automobile, the phonograph, and the radio. Yet many of us have failed to adopt in a similar manner the discoveries of the scientists regarding efficient stock feeding.

### **Changed Conditions Require More Science**

In pioneer days, with land low in price, pasturage abundant, and feed and labor cheap, it was relatively easy to make a profit from stock farming. This was true, even though one knew little about the principles which govern the feeding and care of live stock and though we did not understand the value of the different stock feeds.

Conditions have now changed radically. It is less easy for the inefficient man to make profits in farming. Nevertheless, I believe that the future will hold out fully as great opportunities as the past for the farmer who is a master of his profession.

However, we must all realize that to make a good profit



from stock farming or any other type of farming in the present and in the future, it will require a much more intelligent and scientific kind of farming than in the past.

### **Farm Animals are Living Machines**

Many people do not understand that farm animals are machines for converting or changing the crops of the fields into valuable animal products. Just as it is impossible to manufacture steel from the wrong kind of materials, so these living machines can not manufacture animal products efficiently and economically unless they are supplied with the right amounts and kinds of raw materials.

We call a ration or daily feed which furnishes an animal with the correct kind and the right amount of the various food materials for its particular needs a "balanced ration". Many farmers seem to be afraid of this term "balanced ration". Though they have heard about balanced rations, they have a very hazy idea as to whether the feeds they are supplying their stock provide balanced rations or not. In other words, they do not know whether they are furnishing their live stock with the right kind or the proper amount of the various food nutrients to permit them to make profits.

### **Protein the Key to Balanced Rations**

Protein is the food material most apt to be lacking in ordinary rations, and protein in abundance is needed by animals to furnish the raw material for the manufacture of meat, muscle, wool, and the protein part of milk. Therefore, the most important part of balancing a ration for live stock is to provide a proper amount of protein in the ration.

Recent investigations show that vitamins and mineral matter are also necessary for efficient rations. Fortunately, however, these needs can generally be fully supplied by providing stock with good pasture in the summer and with plenty of well cured legume hay in the winter, as is pointed out later in this discussion.

### **Importance of Balanced Rations**

What is the importance of a balanced ration? It often makes the difference between profit and loss.

In an experiment carried on some years ago by the Illinois Experiment Station one lot of cows was fed a ration which was palatable and sufficient in amount, but which was not balanced. These cows were fed all the corn silage they would eat—all the ground corn they wanted, three pounds of clover hay, and all the timothy hay they desired. The chief defect of this ration was that it was very low in protein.

These cows gave twenty pounds of milk a day, a yield which under present conditions is too low to be profitable. This was in spite of the fact that they had good productive capacity.

Later their ration was balanced by feeding sufficient protein—rich feed to meet the requirements of the feeding standards. These same cows then gave over thirty pounds of milk a day, an increase of about fifty per cent.

Numerous other examples might be given which show that an unbalanced ration is inefficient and unprofitable. Any farmer who is feeding his cows, his pigs or any other class of stock such a ration has no license to kick if he does not make any money. He might as well face these facts squarely.

If a farmer does not know whether he is feeding a balanced ration or not, and has not learned how to figure out such a ration, there is nevertheless no reason why he should remain in doubt. If he is fortunate enough to live in a County which has a County Agent, he will find this man glad to help him. Otherwise, he can get advice from the Agricultural College or from his farm paper. In 1927 there is no excuse for feeding inefficient, unbalanced rations.

### **Guide to Efficient Stock Feeding**

To show how much protein and other food materials the various classes of animals need, scientists have care-

fully prepared "feeding standards". By the use of these tables, together with other tables showing the food materials (digestible nutrients) furnished by the different feeds, one can, after a little practice, work out efficient balanced rations for his animals. Every stock farmer who looks upon farming as a profession rather than merely as an occupation will take pride in mastering the methods of working out balanced rations. These are no more difficult than the problems in arithmetic he solved in the district school when a boy.

### **Adjust the Carburetor Correctly**

No one expects to get good mileage from the gasoline he buys unless he has the carburetor on his automobile adjusted correctly. Yet many men pay large sums for feed without knowing whether their purchases will correctly adjust the carburetors of their live stock. In other words, they do not know whether the feeds they supply will provide their stock with a correct mixture of the various food nutrients, just as the correctly adjusted carburetor provides the gasoline engine with the right mixture of gas and air.

### **Proteins Must be of the Right Kind**

Robert Burns wrote "A mon's a mon for a' that and a' that". Nevertheless we do not believe that one man is like another, or that he has the same capabilities. It is just the same with the proteins in our stock feeds.

Proteins are exceedingly complicated compounds, made up of many different building stones, which the chemist calls "amino acids". Scientists have recently discovered that some proteins contain all the different kinds of amino acids, while others are incomplete, and do not contain certain of these "building stones".

They have furthermore found that animals need for growth and even life itself all of these different amino acids. Furthermore, they can not manufacture in their bodies any missing amino acids from other amino acids in their food, with the possible exception of the very simplest ones. There-

fore, they must have in their feed an ample supply of all the other amino acids, or growth will be checked, production lowered, or even health destroyed.

The next important thing to remember is that the proteins of all of the cereal grains are of the same general kind or composition. All of the grains are low in some of the essential building stones, or amino acids, which an animal needs to build its body tissues, or which a cow needs to produce milk. On the other hand, milk protein contains all of the amino acids in the right proportion for the use of animals.

At the University of Wisconsin our Agricultural Chemistry Department has carried on experiments which show these facts plainly. They have taken young pigs and confined them in cages so that they could analyze all the food eaten by the animals, and also all the excrements. Thus, they could tell just what went on within the pig. If a young pig is fed corn grain as the only kind of protein, it will be able to retain or use only about 23 per cent of the protein in the corn grain—less than one-quarter.

About the same result will be secured if the pig is fed wheat, barley, oats, or rye. It does not make much difference which one of the cereal grains is fed as the only source of protein.

On the other hand, if the same pig is fed milk protein, it will be able to use for growth 55 to 60 per cent of the entire protein in the milk. In other words, it can actually turn into flesh more than one-half of the protein in its feed.

Linseed meal is an excellent feed for live stock, is it not? However, surprising results are secured when linseed meal is fed as the only protein—rich feed to young pigs. They will be able to use only about 17 per cent of the protein in the linseed meal for growth, or even less than when corn or other grain is fed.

If linseed meal is mixed with corn, a trifle better results will be secured than with linseed meal as the only kind of protein. Even with such a combination the results will not be very good, however, for the pigs will be able to use only about one-third of the protein in the mixture.



However, if corn and milk are mixed together in the right proportion to make a balanced ration, then the pigs will use for growth over 60 per cent of the proteins in the milk and corn combination. In other words, we can take this poor corn protein and mix it with the right proportion of good milk protein and make an exceedingly efficient mixture—a mixture which will be just as good as pure milk protein.

These results are due to the fact that milk protein is richer than linseed meal in some of the building stones or amino acids which corn lacks. Therefore, the rich supply of these amino acids makes good the deficiency in the corn grain. This is an exceedingly important matter in feeding certain classes of stock. In feeding pigs, especially those not on pasture, it is of vital importance.

I have never yet seen good results in pig feeding where a man has fed young pigs not on pasture such a ration as corn and middlings or corn and linseed meal. Why is this? One of the primary reasons is that the protein in such a ration is not of the right kind or quality.

If some of you have a flock of chickens at home from which you are not getting many eggs, the fault may be in the ration the chickens are receiving. If they are getting corn, oats, linseed meal, wheat middlings, and wheat bran, do not blame the chickens at all. Blame the quality of the protein in the ration. If you would put some meat scraps or plenty of skim milk in the ration, and be sure the chickens are provided with enough mineral matter, they would be able to manufacture more eggs, because they would have the right kind of raw material.

In all stock feeding operations, look at your animals simply as machines which convert the products of your fields into finished products, like meat, eggs, etc. You can not expect a machine to manufacture steel rails from wooden timbers, can you? Neither can you expect a pig to manufacture pig meat from corn protein alone. You must have the right kind of raw material and in the proper amount.

This is a matter of vital importance in swine feeding. For instance, in one experiment we have carried on, pigs

that were fed barley and linseed meal gained only about a pound a day. On the other hand, pigs which were fed barley and whey gained over two and one-half pounds a day. These were well-grown feeder pigs, and, therefore, were capable of making large gains under favorable conditions. This is an exceedingly interesting result, because whey is not very rich in protein, but yet the pigs produced remarkably efficient results.

As you of course know, most of the protein in the milk goes into the cheese, leaving only eight-tenths of one pound of protein in every 100 pounds of whey. Yet it so happens that this small amount of protein is of the very kind that is necessary to supplement barley protein. Therefore, the combinatoin of barley and whey makes an exceedingly good ration for pigs.

Very young pigs need a larger amount of protein than is furnished by barley and whey; therefore they should be fed some protein-rich feed in addition. On the other hand, for well-grown pigs weighing 150 pounds, barley and whey alone make an efficient ration.

### **Quality of Proteins for Dairy Cows**

In feeding dairy cattle and also beef cattle, the quality of the protein is not of so much importance, providing you have such good roughages as legume hay and corn silage. This is because the proteins in legume hay and in corn forage are of quite good quality. Therefore, if dairy cows are fed alfalfa or clover hay, with corn silage and farm grains, there is no necessity of worrying about the quality of the proteins in the ration. You can buy whichever protein-rich feed is the cheapest for you to use.

The high quality of the protein in milk is one of the reasons why it is such a good food for the human family. Milk is not only rich in protein, but the protein is of the very sort that supplements the deficiencies of the proteins in the common grains. Therefore, it is important that children receive an ample amount of it.



### **Mineral Matter Indispensable in Ration**

During recent years the mineral requirements of live stock have received much attention. As you all know, there are many concerns manufacturing mineral mixtures of more or less complexity. These mineral mixtures are being widely advertised, and astonishing claims have been made for some of them.

There is no question but that an adequate supply of mineral matter is just as important in stock feeding as is a proper supply of protein. This is proved by the fact that an animal will starve sooner if fed plenty of good, but food which is free from mineral matter, than he will if given no food at all.

Fortunately, Dame Nature has provided for humans and live stock as well quite adequately with reference to mineral matter. The foods we eat and the feeding stuffs we furnish live stock contain all the necessary mineral compounds, at least in small amounts. Moreover, the body is able to use many of the mineral compounds over and over, taking them back again into the circulation after having been once used.

Therefore, for animals which have finished their growth, rations containing plenty of good quality roughage, such as legume hay, will usually furnish a fairly ample supply of all minerals except common salt.

### **Stock Need Plenty of Salt**

It is always advisable to supply stock with an ample amount of common salt, except in a few localities where the water or soil contains a large amount of it. This is true in some of the arid "alkali" districts of the West.

The necessity of salt for dairy cows was shown many years ago at the University of Wisconsin by Doctor Babcock. He fed dairy cows well-balanced rations, except that they received no salt, save the amount naturally occurring in the feed they received, (Corn, oats, bran and all such feeds always contain some common salt, or sodium chloride).

After two or three weeks, the cows showed abnormal appetites for salt, but their health was not usually affected for a much longer period. Finally, a complete breakdown occurred, marked by the loss of appetite, rough coats, and rapid decline in both liveweight and yield of milk. However, recovery followed quickly when common salt was supplied. These experiments showed the definite need of common salt in quite liberal amounts for dairy cows.

In feeding dairy cows, a common plan is to include from one-half pound to one pound of common salt in each one hundred pounds of the concentrate mixture, or grain mixture, fed the cows, and then give them in addition access to salt where they can readily take what they wish.

### **Calcium and Phosphorus May be Lacking**

Since over 90 per cent of the mineral matter of the skeleton consists of calcium (lime) and phosphorus, these mineral compounds may fall short in some rations, especially in those for dairy cows, which are using a large amount of calcium and phosphorus in making milk, and also for young, growing animals, which need an abundance for developing their skeletons.

The disastrous results which follow when stock are fed rations containing insufficient mineral matter are strikingly shown in a series of experiments which have been carried on continuously since 1908 by Professor Hart and colleagues at the Wisconsin Experiment Station with growing heifers and dairy cows.

In these trials it has been found that when cows are fed straw for roughage along with grain and grain by-products, they usually produce dead or weak calves. Young heifers raised on such rations even fail to grow normally, and in some cases suffer from nervous breakdowns.

For a few years the nutritional experts were at a complete loss to understand the reason for these astonishing results. However, it has been found that the disasters are due to a lack of lime or calcium in the ration and a lack of one of the vitamins, which will be discussed later, which animals

must receive to enable them to assimilate and use the calcium and phosphorus in their feeds. When calcium has been added in such forms as calcium phosphate (the chief mineral constituent in bones) or even by adding ground limestone or marl, and the vitamin is also supplied good results are secured. However, the simplest way of correcting such a ration is to substitute alfalfa or clover hay for half the straw in these rations. Entirely normal offspring are then produced.

The results of these nutrition trials have been corroborated by the experience of numerous farmers who have had trouble with stock fed straw as the only roughage during the winter feeding period. It, therefore, seems safe to conclude that straw is not safe to use continuously for a long period as the only roughage for breeding stock, unless the precaution is taken to add three to four ounces per head daily of bone meal, finely ground limestone, or some other material supplying lime. It is far preferable to use legume hay as a part of the roughage for breeding cows, mares and ewes.

### **Mineral Requirements for Milk Production**

It has long been known that milk is rich in mineral matter, especially in calcium and phosphorus. However, up to a few years ago it was assumed that when dairy cows were fed common, well-balanced rations containing plenty of protein and a liberal amount of legume hay, there could be no deficiency in either calcium or in phosphorus, for legume hay is rich in calcium, and protein-rich feeds are in general high in phosphorus.

Surprising results were, however, secured in extensive experiments at the Ohio Experiment Station by Doctor Forbes. In these trials high-producing cows have been fed such excellent winter rations as alfalfa or clover hay and corn silage for roughage, along with corn and such high protein concentrates in addition as wheat bran, cottonseed meal, linseed meal, dried distillers' grain, or gluten feed.

On these rations, which have always been considered ideal for dairy cows, in most instances the animals lost calcium, phosphorus, and also magnesium from their bodies,

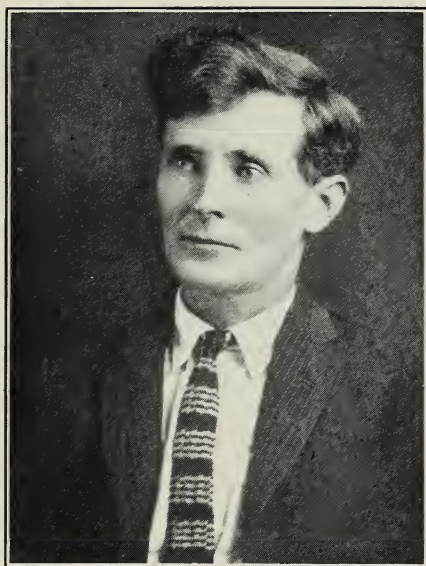
in spite of the fact that the feed they were given supplied what would appear to be ample amounts. For some reason or other, the cows were unable to assimilate and retain enough of the liberal supply of these mineral nutrients in their feed to meet the heavy requirements in producing the large amount of milk they yielded.

Even when abundant amounts of calcium, or both calcium and phosphorus, were added to their ration in such forms as steamed bone meal, calcium carbonate, or calcium lactate (a soluble form of calcium), the losses of these mineral constituents from the body continued. The reason for this little-expected condition is still a problem. Possibly the milk producing capacity of our dairy cows has been so increased by selective breeding that it exceeds the ability of high-yielding cows to assimilate sufficient mineral nutrients from their feed to meet the heavy demand in producing the large flow of milk during the first part of the lactation period. Later on in lactation, or when they are dry, they are able to build up again the stores of these mineral constituents in their bodies.

In extensive experiments at the Wisconsin Experiment Station by Professor Hart and his colleagues, it has been found that dairy cows are able to assimilate calcium much more completely from fresh green feed than from dried forage, such as hay. Furthermore, well cured alfalfa hay is superior to that improperly cured. These trials indicate that the best way of curing hay is to cure it in the bright sun, getting it into the barn as soon as it is dry enough, by means of using the side delivery rake, hay loader, etc. Hay cured by such a method will contain the maximum amounts of vitamins.

All this work on the mineral requirements of dairy cattle is so recent that we do not yet know just how far-reaching the results may be in practical feeding. These various trials, however, emphasize the importance of pasture and other green forage for dairy cows during the growing season, and of furnishing an abundance of legume hay during the rest of the year. Also, the cows should be dried off six to eight weeks before freshening, and during this





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time should be so fed that they will be in good condition at calving. This rest period will give them an opportunity to rebuild the stores of calcium and phosphorus in their bodies, which may have been depleted by the drain of milk production.

### **Practical Pointers on Minerals for Dairy Cows**

On account of the great importance of supplying cows plenty of minerals, it may be well to summarize very briefly and definitely the recommendations with reference to this matter:

In the usual dairy ration there is more danger of a lack of calcium than there is in phosphorus. This is because most of the common protein-rich feeds are also rich in phosphorus. This includes wheat bran in particular and also wheat middlings, cottonseed meal, and linseed meal. Gluten feed, germ oil meal (corn germ meal), brewers' grains and distillers' grains are not especially high in phosphorus.

When 20 per cent or more of the concentrate mixture or grain mixture consists of wheat bran, wheat middlings, linseed meal, or cottonseed meal, the cows will get plenty of phosphorus. If less of these high-phosphorus feeds is fed, it is best to supply additional phosphorus by adding bone meal, as stated later.

A large production of milk and thrifty calves are an impossibility if there is a lack of calcium in the ration. The best way of furnishing plenty of lime is to grow and feed an abundance of alfalfa, clover, or soybean hay whenever it is possible. All legume hays are rich in lime. Furthermore, well-cured, green colored hay, cured in the sun, contains the vitamin which animals need to enable them to assimilate and use the calcium in their feed.

If poor roughage must be used, such as hay from the grasses (not legumes) corn stover grown on acid soil, or straw, add 3 to 4 pounds of ground limestone, wood ashes, or dried marl to each 100 pounds of concentrate or grain mixture. Preliminary experiments indicate that dolomitic limestones, which are high in magnesium may be used satisfactorily as a source of lime.

If there is not 20 per cent of high-phosphorus feeds in the concentrate mixture (wheat bran, wheat middlings, lin-

seed meal, and cottonseed meal), it is best to use 3 to 4 pounds of bone meal or spent bone black with each 100 pounds of the concentrate mixture, instead of using the limestone, wood ashes, or marl. Bone meal and spent bone meal black supply both calcium and phosphorus, while limestone, wood ashes, and marl furnish lime, but practically no phosphorus.

If plenty of alfalfa, clover, soybean or other legume hay is fed, then there may possibly be no advantage in adding a calcium-rich mineral supplement to the ration. However, even with legume hay available for winter feeding, it can do no harm and may do considerable good to add one of these lime carriers to the ration.

### **Feed Calcium Supplements on Pasture**

Fresh, green crops contain an especially large amount of vitamin needed to enable animals to assimilate calcium. Therefore, the best way of replenishing the calcium in the cow's body, which may have been seriously depleted by high milk production during the winter feeding period, is to feed a calcium-supplement when she is on pasture. Therefore, it is especially important to mix one of the calcium-rich supplements with the concentrate mixture fed to cows on pasture. It is probably best to use more of the calcium-supplement than for winter feeding. As much as 4 to 5 pounds of one of the calcium-supplements may be mixed with each 100 pounds of concentrate mixture. If this mixture should not be very palatable to the cows, the allowance of the mineral supplement may be reduced somewhat.

When the cows are not fed any concentrates during a part of the pasture season, the calcium-supplement may be mixed with salt and the cows allowed free access to it. A mixture of  $1/8$  salt by weight and  $7/8$  limestone, wood ashes, marl, or bone meal may be used for this purpose.

### **Guard Against Goiter**

If trouble has been experienced from goiter or "big neck" in calves, this may be prevented in the future by giv-

ing potassium or sodium iodide to the cows through the gestation period. Where there is no trouble from goiter this treatment is not needed. (For a full discussion and method of treatment see Bulletin 350, Pages 4 to 10).

### **Vitamins Are Necessary for Life**

A few years ago the word "vitamins" was unknown, but now nearly everyone has heard of these mysterious substances. Perhaps to many persons the statements made concerning the marvelous effect of these compounds on the human diet and likewise in stock feeding have appeared highly improbable and they have wondered "Just how much does all this talk about vitamins amount to anyway? Is there any need of giving any consideration to them in planning the diet of my family or in feeding live stock?"

Practically all the discoveries about vitamins have been made in little more than a decade. Although our knowledge concerning them is far from complete today, yet brilliant progress has been made during the past few years by the scientists studying these matters. Therefore, many conclusions may now be safely drawn concerning the importance of vitamins in the feeding of humans and in the feeding of farm animals, as well.

Thus far five vitamins have been discovered. I will take each one of these up and tell you a little about the interesting story connected with it.

### **Vitamin A**

The first vitamin is vitamin A, or the fat-soluble vitamin. The dairyman is especially interested in this vitamin, because it is the vitamin that is present in such liberal amounts in butter fat. It is absolutely essential for young animals as well as old animals, and for humans as well as for stock. As the diet of young children is quite limited, it is very important that they get plenty of milk and other dairy products, because otherwise they might not secure enough of this vitamin.

About thirteen years ago scientists in the United States

and also in Europe discovered that if animals were fed upon feed from which all fatty substances had been removed, they failed to thrive. Many became blind and finally they died. If such fats as lard, olive oil, or cotton seed oil were added to the ration, no improvement resulted. If butter fat, whole milk, cream or the fat from egg yolks were added, the diet was made complete and the animals made normal growth.

What was lacking in the ration was, therefore, not fat, but some substance which was soluble in fat and was hence carried along in the butter fat and egg fat. This was vitamin A. What had cured the animals was not protein, carbohydrates, fats or mineral compounds in the milk added to the ration, but the very minute amount of this remarkable vitamin.

Even yet, the most painstaking and clever efforts of skilled chemists have failed to discover just what this marvelous substance is in butter fat and in egg fat. The amount is so small and perchance the substance is so complex that it may never be possible to isolate and identify it. So for the present, and perhaps for all time we can know this vitamin merely through the results produced by its absence or its presence in food.

Where animals are fed rations containing too little of the vitamin, a peculiar eye disease may develop which eventually causes blindness. Furthermore, at least some animals are especially susceptible to pneumonia or other respiratory diseases when the supply of the vitamin is insufficient.

If young animals are fed rations containing none of this vitamin, they invariably fail to grow. Also no young are ever produced and reared by females fed rations low in this substance. It is, therefore, absolutely essential for the life of all higher animals, and is needed by mature animals as well as those that are young and growing.

It has been found that certain other foods besides milk and eggs are rich in this vitamin. Most important from the standpoint of stock feeding is the fact that all green-leaved plants contain an abundance of it. Therefore, all stock



which are on pasture or which get plenty of well cured hay secure enough of vitamin A.

Most of the cereal grains are low in this vitamin, but it has been recently discovered by Dr. Steenbock at the Wisconsin Experiment Station that yellow corn is fairly rich in it, while white corn contains little or none. Among human foods, Irish potatoes, wheat flour and beets are low in the vitamin, while liver, yellow carrots and sweet potatoes are high in it.

It is very essential that children secure plenty of the fat-soluble vitamin in their diet, for most of the foods which we eat are low in it. A lack of this vitamin is undoubtedly one of the causes of poor health in children throughout the world. It has been found that twenty percent of the children of school age in the United States suffer from malnutrition, and a much larger percentage in less progressive countries. For this reason nutrition authorities all over the world now emphasize the need of a liberal consumption of milk and dairy products.

In considering the use of milk as a food we must always bear in mind that most of vitamin A is in the butter fat. Therefore, skim milk, although it is an excellent food from other standpoints, is not rich in this vitamin.

In stock feeding a plentiful amount of the vitamin is furnished if cattle, horses and sheep get an abundance of well cured hay and good silage. If young pigs which are not on pasture are fed white corn and skim milk, they will often develop paralysis or die from pneumonia, due to a lack of this vitamin. Pigs on pasture secure plenty of the vitamin from the green feed they eat. White corn is safe for winter feeding if a small amount of well cured legume hay is fed along with it, even to young pigs.

### **Vitamin B**

Next I will discuss Vitamin B, or the water-soluble vitamin, as it is often called. Doubtless you have heard of the disease called beri-beri, which formerly affected many of the people in the oriental nations, such as the Chin-



ese, the Japanese and the Filipinos. In the old days when these people lived largely on rice milled by their old crude milling process where they merely took off the husk of the rice, they did not have beri-beri. However, when the improved milling process came into use, which not only took off the husk of the rice but also took off the rice germ and the brown coating on the outside of the kernel, they began to have beri-beri and many of them perished. In fact, this disease became a national calamity in those countries.

Many theories were advanced as to what caused beri-beri. For example, a Japanese scientist called Takiki had the theory that beri-beri was caused by a lack of protein in the diet. Takiki was absolutely wrong, but yet he was able to cure beri-beri. On the return of one of the naval training vessels from a long trip it was found, as usual, that many cases of beri-beri had developed and several of the boys had died. During the voyage the people on board had, of course, lived nearly entirely on polished rice. This had been the standard Japanese diet for many years.

Takiki probably told the officials, "I told you so. If you would pay attention to my theory and use the sort of diet I suggest, this would not have happened". Probably on the theory they were willing to try anything once, when the next naval training vessel set sail for an extended voyage they said, "We will follow Takiki's recommendation." He advised they add fish, eggs, and meat to the diet for these boys on the training vessel. They did so, and there were practically no cases of beri-beri. The only ones who came down with beri-beri were the ones who said, "New-fangled ideas are all wrong; the old ideas are good enough for us." They ate polished rice, and during the voyage came down with beri-beri.

After this, Takiki was considered a hero—and yet his theory was absolutely wrong. Beri-beri is not due to a lack of protein. It was not found out until many years later that beri-beri is caused by the lack of the specific vitamin B.

If pigeons or chickens are fed polished rice alone, after a while they will show the symptoms of a serious nervous disease. They will look as though they had been

drinking moonshine. If they are then fed the water extract of rice polishings, the outer part of the rice kernel, in two or three hours they will recover remarkably. This wonderful recovery is due simply to the fact that the outside of the rice kernel contains vitamin B.

In our human diet in this country we do not need to worry about the lack of vitamin B. Patent flour and polished rice are low in this vitamin. On the other hand, meat, milk, vegetables, and many other foods are rich in it.

The American Medical Association, after making a thorough study of the matter, concluded there is no evidence of a lack of this vitamin in the diet of the American people. This is an important matter, for one of the large concerns manufacturing yeast recently carried on an extensive campaign in an effort to get farmers to feed yeast to their livestock. In my opinion, there would generally be no benefit from adding yeast to well-balanced rations fed to our farm animals.

### **Vitamin C**

So far as our present knowledge goes, the third vitamin, called vitamin "C", or the anti-scorbutic vitamin, is of little or even no importance at all in the feeding of all classes of farm animals. This vitamin prevents the disease called scurvy, which affects humans seriously when they can get no fresh vegetables, fresh fruits, or other foods containing this vitamin.

Farm animals either do not require any of this vitamin, or else they need only such extremely small amounts that they always get plenty in their feeds. At least there is no definite proof that farm animals ever have scurvy.

In feeding humans, monkeys and guinea pigs, however, this vitamin must be furnished or scurvy will result. The vitamin is supplied by fresh fruits, vegetables, milk and fresh meat, but is low in the cereals. It is easily destroyed by prolonged cooking or drying at high temperatures. It is to furnish this vitamin that infants are so commonly fed orange juice.

### **Vitamin D**

From the standpoint of stock feeding the fourth vitamin is very important. This vitamin, which prevents the disease called rickets, is known as vitamin "D", or the anti-rachitic vitamin. This disease of rickets seriously affects the bones, especially of young animals. In young animals suffering from the disease, the calcium and phosphorus are not deposited properly at the ends of the bones, where the growth occurs.

Rickets may be caused by a lack of calcium or phosphorus in the food, or by a failure of the body to assimilate these minerals. Even when an animal is supplied plenty of calcium and phosphorus, it is apparently unable to use it for bone formation unless there is plenty of the anti-rachitic vitamin in its food.

Sunlight also has an important relationship to rickets. Animals in darkness or out of direct sunlight are more susceptible to rickets than those exposed to sunlight.

Under winter conditions in the northern states, young pigs are especially subject to rickets. They become lame and stiff, particularly in their hind legs, and farmers call the trouble "rheumatism" or "paralysis". This condition can usually be prevented by including a small percentage (about 5%) of good green-colored alfalfa hay in the ration, and providing plenty of calcium. Apparently dairy cows may also suffer from a lack of the anti-rachitic vitamin under winter conditions, as has been pointed out previously.

### **Grow More Legumes**

In conclusion let us consider what all of these recent discoveries mean in terms of practical feeding of dairy cattle. To me, all of these recent experiments conclusively show the high value of legume hay for stock feeding, and the great importance of dairy products in the human diet.

Let us briefly review the merits of legume hay for stock feeding. First of all, you will recall that I discussed the necessity of livestock getting a sufficient amount of protein—in other words, a balanced ration. One of the primary reasons why you should grow an abundance of legumes is because they are rich in protein, alfalfa hay be-

ing nearly as rich in protein as is wheat bran.

Next, I discussed the importance of the quality of proteins, and pointed out that legume hay contains protein of the right kind or quality to supplement the deficiencies of the cereal grains.

It was next pointed out that minerals are highly important in economical milk production, and the calcium was the mineral constituent, in addition to common salt, most apt to be lacking in dairy rations. One of the important advantages of alfalfa hay or hay from other legumes is that it is always high in calcium or lime content.

Then I discussed the importance of the various vitamins in stock feeding, and pointed out that only vitamin A and vitamin D are apt to be lacking in the rations fed livestock. Legume hay is rich in both of these vitamins, if it is well-cured and green in color.

There are, therefore, all of these important reasons for growing plenty of legume hay on every stock farm. In other words, these recent discoveries in stock feeding, reduced to their simplest terms, emphasize anew the importance of large acreages of legumes in any well-planned system of agriculture.

## BANQUET—MASONIC TEMPLE

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Wednesday Evening, January 12, 1927

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N. W. Hepburn, Peoria, Illinois, Toastmaster

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INVOCATION, Rev. Ransom, Pastor of the Methodist Church.

### COMMUNITY SINGING.

THE TOASTMASTER: Ladies and Gentlemen, Friends of the Illinois State Dairymen's Association: It is now the privilege of the Toastmaster to open the Fifty-Third Annual Banquet of the Illinois State Dairymen's Association. Now this is not going to be an address of welcome. It is not going to be much of any thing. As I was riding along today, and I rode three hundred miles to get here, my mind ran back over the history of the Association, but I am not going to tell you that though perhaps you would like to know. As I came in town I saw a great deal of work has been done and a great deal of preparation had been made for this meeting and I realized that some one here sensed the significance of a meeting of this kind. I realized a great deal of work had been done and that somebody had put their shoulders to the wheel, and I realized that there is still going to be some work to do, some of this decoration is to be undone, which reminds me of a story of a couple living in an apartment and the gentleman of the house called up the bird store and said, I wish you would send me two hundred thousand cock roaches and the receiver at the other end said "You must mean something else". He said "No: I want two hundred thousand cock roaches. I am leaving the house today and my lease says I must leave it in the same condition I found it. Now physically I hope these ladies and gentlemen, who are your guests, will leave



the town in the same condition they found it, and in some respects I hope they will not leave it in the same condition they found it. I hope they will have left some good to you, something that will be a lasting benefit to your community.

There are a number of individuals who have had to do with the development of the Illinois State Dairymen's Association. When I speak of old members I think about J. P. Mason, who cannot be here, and I think of Newman, and I think of George Caven, who has arranged our programs for over a quarter of a century, and we think of some who have passed out. We think of our beloved Mr. Marple, and we think of some others who have contributed to the Illinois State Dairymen's Association, and what is to be contributed. If you will look down the list I think you will begin to realize the intellectual is about to happen, and if it does not turn out I am not going to be responsible for what happens next. It is customary to say that no soul is saved after the first five minutes of talk. Now the speakers might bear that in mind. We do not want these folks to walk out, Mr. O'Hair. You are the next speaker? We don't want them to walk out. They would not walk out for courtesy. We do not want them to feel like the story of the man who walked up in front of a theatre and said I want to go in there, my wife is in there with a strange man and the manager said "Be still. You go to the back door and I will have them come out," and the manager went in and announced "there is a man out here who is very much excited and he says his wife is in here with a strange man, and if you are you had better come out quietly," and eleven couples arose and passed out.

The story is told of a minister who on one occasion only delivered a sermon that was ten minutes long and he explained that the balance of his sermon was chewed up by his dog. After his service he met a good friend of his who did not belong to his church and he said "Pastor, I heard of your misfortune today." He said "Have you got any pups of that dog. I would like to take one and give it to our minister."

The next speaker does not need any introduction. He knows that he needs not to talk too long, so I introduce W. S. O'Hair, President of the Illinois State Dairymen's Association.

MR. W. S. O'HAIR: I wonder why Tie Smith left the room. Now I am sure you do not want any long talks. You do not want any accidents as we are all in here pretty close.

I attended a banquet like this last fall up in Northern Illinois and the fellow that was speaking kept going too long and the chairman took his mallet and he seemed to aim to hit his mallet to rap for order and he hit an old white headed man, and he grabbed him and shook him and said "I beg your pardon, I beg your pardon," and the old fellow said "I can still hear him. Hit me again."

Now I would make you a speech. I have two speeches that I deliver. I am a little different from Dr. Hepburn. He goes over the country with eight or ten titles. I have two, but one of these I am a little careful about delivering. I am like the little boy on the street car. A very dirty-faced, dirty nosed boy was riding on a street car in Chicago and a very beautifully dressed lady got on the car and sat behind him and she said, "Son, have you a handkerchief?" And he said "Yes, but I never lend it to strangers." But I have a speech I will give you a little later. A friend of mine with his wife and twenty-one children, was sitting at the breakfast table the other morning, and she said to him, "Charley this high chair is getting kind of rickety and I am afraid that this baby that is dressed in green will fall out and hurt her," and Charley said to Mrs. Taylor, "After breakfast you go down in town and get a new chair, a substantial one that will last a little while."

I got off of the train the other morning down at the Big Four station and I went into the waiting room and I saw several ladies holding their skirts and pushing them down over their knees. I said to an elderly lady "what is the matter?" She said "Haven't you heard." I said "No". She said "Laborn Watson is looking for two more calves."

Three tramps were sitting around the fire and one was talking about the big things Roosevelt had seen; the lions and tigers, and he said "Jim, did you ever see any thing". The second tramp said "Did you ever have delirium tremens?" and he said "No". He said "Hell, you haven't seen nothing."

I live up in an Irish settlement. Mrs. O'Hair is Irish and we elected a squire last fall, last spring I guess it was and he notified several of us that he was going to have a wedding and he wanted us to come over for the wedding, and we went over before the couple got there and we went down and examined some of his live stock and some of his private stock and by the time the couple came for the marriage we were all ready for the wedding and we went into the house and stationed ourselves along the wall, and this Irish squire was Pat Curran and he looked at us and said "What Pat Curran and the Lord has joined together let none of you fellows monkey with".

Well, if I was going to make you a speech here tonight I would make you a Democratic speech. You can't tell much about what the Democrats tell you and not a thing the Republicans tell you. I have figured out a plan where things can be bettered. The farmers are hard up, the merchants are hard up and the bankers have to keep the safes locked against themselves and so I have studied out a plan. I think it would be a good one if we would all get in one church and pull together, and as I look over the creeds of the churches I think the Hard Sheeled Baptist would be the one. They have three good points. That is, first, every man pays his debts; the second point is there is no harm in taking a drink of whiskey, if you have the chance; and the third point is every man should vote the Democratic ticket, hair or no hair.

THE TOASTMASTER: I don't know just what school of theology Mr. O'Hair went to, but it is all right.

As you will note from the program the next gentleman down here is a banker. I understand he recently had this experience. It is said a Jewish gentleman stepped into his bank one day and said "Do you discount notes" and he said

"Yes: we do some times". And the Jewish gentleman said "I have a note for ten dollars I want to discount" and the banker said "let me see it" and he produced the note and the banker said "Have you any collateral" and he said "Yes: I have five hundred dollars in liberty bonds" and he told him to bring it down and he brought the note down and the liberty bonds, and the banker said to Jakey, a friend of Ikey, "what is the matter with Ikey, has he gone crazy," and Jakey said "No: I guess not. I always thought he was a good business man." So Jakey met Ikey and he said "What did you want to put up five hundred dollars in Liberty bonds for collateral on a ten dollar note" and he said "Wasn't the note discounted for nine sixty? Where else can you get a safety deposit vault for a year for forty cents." I don't think we need to go any further and we will at this time introduce Mr. O. M. Karraker.

O. M. KARRAKER (President First National Bank): Ladies and Gentlemen of the Illinois Dairymen's Association: I could tell you a good many things that have happened in the course of my business affairs, but I am not going to speak on that subject. I don't know just what my subject should be. All the restrictions I have been given is that I was not to speak over five minutes. I suppose coming this early on the program I am to say what welcome you have to our city and how glad we are to have you present. It is a privilege to have you here and a pleasure to have you here because this is a wonderful city. You will notice the strange thing about Harrisburg is that you can travel east or you can travel west; you can travel north or you can travel south and continuing that direction that you will come back to the starting point. It has been that way with Harrisburg ever since it was a little town—it is the center of the universe. This is a fine place to work, and a fine place to try it. You should come down here to test it. We have here the finest of weather and the finest and most varied of industries. Come and try it. The door is always open. You are always welcome here. While I am on my feet I think we will all agree that whatever the people do



down here that we are on the road to happiness. It was my privilege to stand in the Roycroft shop and he said "If you find this work you will know what happiness is if we do not get happiness through work itself. I think there should be both happiness and work. We down here are willing to work. I have seen people who work and are willing to work who never reach wealth. It is because they do not run their business to procure wealth and that is the reason we want people to come here that those in the cities should support those in the country, in bringing organizations that will bring success to all concerned.

Over in Cortland, New York, a couple of young men received a woven wire machine, and the freight rates were high and they wanted to make woven wire and they said it can't be done but they did and after forty years they have a great factory there. They wanted to live in Cortland and they have made their town known throughout the world. David Mayo, the great surgeon did not live in the center of the world but he built his hospital at Rochester, a little town in Minnesota, and he has made his town known throughout the world from the success they have made. We have learned this too—the people down here in Saline County, and we are going to reach out and teach you how too. We are here the center of the coal belt and when that is worked out it is going to be taken from the soil that we will have to take our crops. We do not have to go to the big centers to have happiness. The Mayo Brothers wanted to live in Rochester and they built their hospital there and they live there and they are known the world over. Over in Chicago Armour did not have the materials for his big packing plant but he wanted to live in Chicago and he brought the materials to his plant. The people who manufacture shoes want to live in the east and so they build their plants in the east. And we want to live here and we are going to utilize the message these folks have brought here. I hope this will be passed on. This happiness is yours and you can help yourself and come this way again.

THE TOASTMASTER: A district visitor went to see an old Scotch woman who was apparently on her deathbed.



The visitor noticed that she was thinking more of herself than any thing else, and after some conversation he said it does not appear that you think anybody will be in heaven but yourself and your minister. She said I am not so sure about my minister. I am not so sure about your visitor but there is ample evidence of him being here. Charley Taylor, chairman of the committee, will speak at this time.

CHARLES TALLYOR: Mr. Chairman, Fellow Rotarians, and Kiwanians and Invited Guests: A year ago you asked me, with some associates, to go to Galesburg to invite the State Dairymen's Association to hold their next annual convention in Harrisburg. I made certain pledges that night for the city of Harrisburg and these invited guests are to pass upon the question whether or not the pledges we made that night have been fulfilled. I said you would meet hospitality. I think you have met it. I told you we would do whatever Galesburg, Peoria or any other town would do and do it better because we have got a better town than any of them. Our home folks did not understand how Harrisburg was able to secure this convention. We got it like the big long nigger in Illinois who ran a foot race. A man said boy are you a runner. He said "I sure am." He said "have you run on the track?" "No sir: but I have run by myself and I sure can run." He said "Nigger you get down into your running gears and you get out on this track and you are going to run this foot race" and as he came by he poked him with his walking cane and the nigger fell about nine feet ahead of anybody else and he said to Dad Long, "My God didn't I have a gang hollering for me." You sent a booster with me. I had a good press agent, Fred Lieberman, and what I lacked in telling the truth about Harrisburg he finished it out with something else. He said to me I have to go down in town and do a few things and he went down to the newspapers and he said one of the past Governors of Illinois, Governor Taylor, was there and you want to get in touch with him and his gang, and it was not very long until a delegation come to meet me and wanted to find out about me and wanted to know how big a crowd I had with me, and I said I had a press agent. My friends,

in Harrisburg, I would like to say I was born here and I have enjoyed living here. I am as happy as a man can be because when I go down in town and I meet my friends I can say "hello Bill." I want to tell you what our old friend Marion Whitley said to the Chamber of Commerce of St. Louis when they came down to Harrisburg on one of their good fellowship trips. They came down and had their speakers and we thought we would have Marion Whitley reply to them. He said if you gentlemen are looking for a good town and you want to get out of St. Louis where you can make a good living easily come to Harrisburg. I want to say something you see some uncomplimentary remarks about Southern Illinois in which the good citizens of this part of the State have no part. If a lot of fellows want to get out to have a gang warfare and kill each other off I am willing to let them fight it out. If you asked me what faction I belonged to in Harrisburg, I would say I do not know I did not know there were any factions. I thank you folks for your help. Three weeks ago Mr. O'Hair said to me do you know that the first evening of the convention has to be turned over to the entertainment committee, and I said I did not know that and I went to the churches to my friends and I asked my wife and we got the folks to put on the entertainment we had last night and I hope you enjoyed it just as much as our folks enjoyed putting it on. I want to clear up things in my household as I have been asked who was that big black greasy woman. I want you to see her with the war paint off—get up here, Mrs. Taylor, so they can see you. (Laughter.) We are both mighty happy to have you come to my town. I love this community better than any place I have ever lived—and truth to tell it is the only place I have ever lived, and I have been here from the time they had two teachers in the school until now they have over thirty teachers. I have enjoyed all these changes and I hope you have enjoyed coming to us and that you have enjoyed the hospitality of our folks. I hope when you leave you will not say that when Charley Taylor came to Galesburg he promised to do certain things but they have not been carried out. We have an interest

in the boys and girls and we want to say this community went out and sold as many memberships as any spot in Illinois. We are mighty glad to have had you come down to Harrisburg, my home town and community, and if there is something our folks have left undone we will be mighty happy to finish it up before you leave, and some time we hope you will want to come back to us and want to come so badly that we will not have to go clear across the State for you and that you will say that Harrisburg is a most pleasant spot.

**THE TOASTMASTER:** In answer to Charley Taylor as to the verdict of the jury, I got it before I hardly got into town, and it was favorable, Charley. I read a story the other day about a man being selected for a jury and they was cross examining him and asking him a lot of questions. They asked him "Are you married?" He said Yes sir. How long have you been married? He answered about five years. In regard to this case have you expressed any opinion or come to any conclusion in this case? He said "Not in five years." (Applause).

The next man on the program is a milk man as I understand it and they say he has had experiences. Milk men always have experiences. They have experiences every day of one kind or another, and this time on a dark, hazy morning his wagon was up set and as always on such occurrences a growd gathered and the milk run down in the sewer and a gentleman was standing behind a large woman and he said, "Why what a waste" and this woman turned and said, "Young man mind your own business." I desire to present Mr. Stanley Wilson, president of the Harrisburg Dairy Products Company.

**STANLEY WILSON:** Mr. Chairman, Ladies and Gentlemen: We are not going to give away any of our past experiences. This is truly a very gracious meeting and a very happy one. There is one pathetic side we could mention, but when we stop to think what is the basis of such a meeting as this we go back to the humble dairy cow and see that she is a humble animal, but her responsibilities are many. They say she is responsible for some seventy per

cent of the people of the country being here. There is no question of the prosperity she brings to the community she is in and most any business of any kind reaps a benefit from it, and with all of this we have to bow to the dairy cow. We must not forget her. A meeting of this kind is to further the cow into better breeds and better production. We the Harrisburg Dairy Products Company manufacturing a dairy production wish to thank the many persons of the Illinois University and our local fellows who have lent a willing hand to make it such a success as it has been.

THE TOASTMASTER: We now have the pleasure of looking at and listening to the famous Kiwanis Quartet. I heard of this quartet before I came to Harrisburg. I don't know but what Charley Taylor told us about it when he came up to Galesburg.

The Kiwanis Quartet sang several selections. (Great applause.)

THE TOASTMASTER: I am sorry you did not draw applause like that Mr. O'Hair.

MR. O'HAIR: Try it again, I might do better.

THE TOASTMASTER: A girl walked into a drug store and told the druggist she wanted a package of dye, and he said, "what kind do you want." She said, "I want as fashionable a dye as I can get." He said, "what does your mother want to dye? Does she want it to dye clothes?" She said, "No: the doctor said mamma had stomach trouble and she was going to have to diet and she wanted to diet with something fashionable."

Now the next speaker is one of the men that has made dairying fashionable. I think Professor Fraser is the pioneer on the subject of dairying, and I am glad to introduce him on this subject at this time.

PROF. W. J. FRASER, of the University of Illinois: I believe a year ago over at Galesburg I promised at that time to read a tribute to the cow one year from then at



Harrisburg, so I think that is what brought the convention here rather than Mr. Taylor. I think a few of us appreciate what kind of a creature the cow is, and if you will bear with me I will read, "The Place of the Dairy Cow in the Affairs of Men."

"Who has ever thought to measure the place of the dairy cow in the affairs of men; to sum up her contributions to world achievement? Her gift is the highest of men's necessities—food—and the most perfect food man has ever found. Milk is more than bread, more than meat, more than all the roots and grains of the field; it is the first food of man and the greatest material gift to mankind.

"Milk is a mystery; we cannot tell all that it contains, or explain all its magic service in nutrition, but we are sure that it supplies whatever the body needs for vigor and growth. Milk is the material essence of mother love for her young. It is the highest food of earth and the **real** elixir of life.

"The dairy cow is not only the abundant producer of this necessary food, but she produces it so efficiently that it can be a regular article of diet for the masses, and this same cow is also the greatest economic ally of the farmer; the soundest basis of his business. She is the greatest specialist in the world in both her skill of labor and total of product. There is the silence of the library and the awe of a superior work being carried on as one comes into a dairy herd. All the laboratories of the earth and all the delicate and precise operations of the most skilled chemists cannot equal the endeavor and perfect product of these silent, contented workers.

"This quiet, unassuming dairy cow, so familiar in any wayside pasture or common stable, is a creature in disguise. We have barely begun to understand her partnership in our fate and fortune.

"How did the dairy cow find the secret of her marvelous development and strike the master chord that was hid from all the wise and prudent? Was it not in her pure motive and good will and highest ideal of motherhood? She gives herself utterly and willingly in this meek and glad



endeavor, and she has found the highest expression of God's creatures in a giver of food for man." (Applause).

THE TOASTMASTER: As you know the Illinois Dairymen's Association offer some prizes for a certain thing. One of the prizes had to do with the membership campaign—that is the girl or boy in a community who got a certain number of memberships. The first prize winner is here tonight, Miss Evelin Thomas, and she is going to give us a reading. The program said she was.

MR. THOMAS: We decided the strain would be a little hard on her and she wanted to go in the Milk Maid Contest and we thought best for her not to give the reading.

THE TOASTMASTER: Which all goes to prove you cannot believe all you see in print.

The next speaker was Professor F. B. Morrison, of the University of Wisconsin, and I understand he had to go to catch a train. We all regret that but we have a man that we want to have speak a word, Mr. Pillaster.

A MEMBER: He has gone too.

THE TOASTMASTER: I understand that Professor Harry Taylor has illness in his family and cannot be here tonight and that is a matter of regret and I hope the people here that are acquainted with him will bear him my regrets.

I don't know what some of these young fellows have in mind doing but one of them said I wish you would get me on the program. I did not press it up but I will let you look at him, Professor C. S. Rhode, of the University of Illinois.

PROFESSOR C. S. RHODE: Mr. Chairman, Ladies and Gentlemen: That remark will please my friend O'Hair. I turned to a gentleman who was sitting by my side. I would know him but I could not remember his name and face and I said, "you are a good politician", and he said, "I am not a politician," and I said, "what are you," and he said, "I am a Democrat."

Awhile ago I glanced over at Charlie Tilson and he reminded me of an old colored preacher who was caught one day loving up one of the sisters of his congregation and the deacons got together and they decided to give the minister a trial by jury, and the jury was formed and the minister was asked to come before the jury and in coming before the jury he brought the good book and he opened it and read, "The Lord is the Shepherd of the flock and the shepherd of the flock took the lamb in his arms." The jury was floored and they brought in the verdict, the next time our worthy minister finds it necessary to take one of the lambs of his flock in his arms that he take a ram lamb.

While I was sitting in the high school room this afternoon and enjoying the splendid program I did a little thinking as I relaxed, and as I looked through the audience it amazed me that there was not nearly as many of the boys and girls that had these calves distributed to them last year as there should have been and not as many of their fathers and mothers as there should have been. I had the same experience a few weeks ago when I was here conducting a dairy feeding bureau and at that time I do not believe there was a boy there. That is unfortunate and I believe as we plan other dairy meetings it might prove to have greater effect to get the farm boys excused from school to attend the meetings, and to make a greater effort to pull them in. Now I know there is some information along the line of feeding that they need. Those who were down here Tuesday noticed that many of the heifers were underfed. I know some of you will say we can do the same thing. I think we are running safe at one end and losing a good deal at the other like Abe and his brother. His brother said, "Why are you going up that way?" and he said, "To save shoe leather," and he said, "Be careful not to tear your pants when you are saving your shoes."

An employe of the Big Four went to the office of the President of the Big Four, with his hat on his head and he walked up and said, "My name is Jones and I want a pass to St. Louis," and Mr. Smith was interested in teaching politeness to employees and he thought this was a good time

to get it over and he told Jones, and he said, "Come back in an hour and see if you cannot do better." And he came back in an hour and stepped in with his hat in his hand and he said, "Have I the honor of addressing Mr. Smith, the president of the Big Four," and he said, "My name is Jones. I work down in the yards and I would like a pass to St. Louis," and Mr. Smith said, "I will be glad to do any thing I can," and Jones said, "Will you please go to hell, I have a job with the C. & E. I." There are other things we have been neglecting doing. I have in mind the matter of keeping records. Mr. Foss is going to be on the program in the morning and every man and boy should be here to hear him. He is going to show you how he keeps up his records.

There is another thing I want to mention. As I sat there this afternoon and listened to the talks, and that is I wondered why people should get out to meetings of this kind, and I thought one thing was to get information the speakers handed out in a practical way, and as they mingled around they would meet other people and it seems that people attending these meetings do get a lot of inspiration. I thought of the inspiration I received this morning as I thought of a man in an adjoining county in Southern Illinois, and I wish every man in this convention could have heard that story. It is a story plumb full. He is a man that is happy with his job. He is a man that is making money and is a man that is using the dairy cow to bring in a very large part of his income. First he was happy; he was contented; and the other thing was that in 1922 he bought his first cow. He had been rather a large feeder of beef cattle. He went to a sale to buy a cow for the family and there was in the sale three Jersey heifers and a man came to him and said buy those three heifers they will make you more money than anything you have ever fed. He bought them and he traded them for two cows with two calves and later on he bought a bull for \$350. He sold his first can of cream in June and he told me on that investment he had sold \$3100 and he had sixteen cows in the herd raised from the original start and he had not figured in the skimmed milk he had fed to hogs and poultry. It strikes me that

it would be a good plan in making up our programs for future meetings to get some men on them that have made a success, and they will give good inspiration. I am going away with a lot of kind thoughts for people who have done their job pretty well, but yet from the standpoint of dairying there is a lot to do.

**THE TOASTMASTER:** One of the things that has contributed to this meeting tonight has been some of the contests put on, and the next number on the program is the dairy maids contest.

I forgot to tell you that Mr. Lally, Charley Foss and Professor Muckelroy are the judges. I don't know how they got to be because I do not know what the qualifications are for judging a dairy maids contest. I think they asked to be put on.

They say a Methodist negro exhorter was saying, "Come folks and join the army of the Lord," and some one said, "Where do you belong," and he said, "Over to the Baptist Church," and he said, "You belong to the Lord's navy, you don't belong to the Lord's army."

The next speaker is the director of Agriculture and I guess he has a few things to do with agriculture and I want you to see and hear him.

**S. J. STANARD, Director of Agriculture:** Mr. Toastmaster and Friends: I had intended to deliver a speech tonight, had it all prepared, but I am not going to deliver it for after having seen the last number on the program, who would not want to come back to Harrisburg? If Professor Rhode had had the seat I had he would never leave.

A little while ago I had to leave this pleasant meeting as I had an appointment with the broadcasting station, and I missed the program. The part I missed I heard was "Sweet Adeline." I have heard it sung by many different kinds of drinkers. Many times in the past Mrs. O'Hair has said she feared her husband would go too far and come home with a black eye. I would like to have some one send her a telegram that her fears were well grounded.



The other day I was invited to speak at East St. Louis and I had work in the office that took longer than usual and I reached that meeting barely in time to go on the platform, and the chairman of the meeting finding out I had not had time for lunch, in introducing me he said, "A minister who was to preach was being entertained by one of the congregation. He did not eat very much and the good lady asked him if he did not like the food or why he did not eat. He told her if he would eat a good square meal he would not be able to preach a good sermon. On returning home the gentleman of the house asked his wife what she thought of the sermon and she said she thought the minister had just as well have eaten his meal." So I have had a good time.

TOASTMASTER: A man was condemned to be hung and the judge said "Prisoner, you have a right to make a last request if you want to and you might do it now," and the prisoner said, "I can't think of any thing I want to request except I would like one more opportunity to shave the District Attorney." I am sure we would all like one more opportunity to get at our friend Muckelroy, and when ever the dairymen want anything done in southern Illinois they call on Professor Muckelroy and I am going to call on him right now.

PROF. R. E. MUCKELROY, Southern Illinois State Normal, Carbondale, Illinois: Mr. Toastmaster, Ladies and Gentlemen: I was somewhat surprised when I saw my name on the program, but I suppose I need not be surprised for when I came I found the old fellows here and I missed one gentleman and I said, "Where is O'Hair?" And one of the gentlemen said, "Haven't you heard of his trouble last night?" and I said, "No," and one of the fellows said, "Last night or this morning between one and two o'clock Mr. O'Hair called down to the clerk of the hotel and said 'Clerk, this is Mr. O'Hair of Paris. I am in trouble up in my room. There is a couple of mice up here and I can't sleep' and the clerk said 'what are you paying for your room' and Mr.



O'Hair said a dollar and the clerk said 'what in the hell do you want more, a bull fight.' "

Mr. O'Hair asked the dairymen this afternoon down at the school room to bring their wives out in order that they might enter into this business of dairying. You know once upon a time at a dinner party they were discussing whether or not the ladies should enter business relations with men, and the men gave as their reasons and said they should never be allowed to enter the business of men because they never could keep a secret and one of the ladies said, "That is not so. I have not told my age since I was twenty-five," and he said, "You will spill the beans one of these days," and she said, "I guess not when a lady has kept her age twenty-five years she will keep it the rest of the time."

If I did not know these men so well and did not know them in their business relations I would think of them very much in the way of three little boys who were supposed to have gotten rid of one of their pets. They were very good friends and they had been going to church through a revival and they had three pets, one had a little bantam rooster, the other had a Poodle dog and the other a little Tommy cat and they preached and got them converted and the next thing they wanted to do was to baptize them. Each boy had to baptize his own pet and they took them to the waters edge. The little boy who had the bantam rooster waded in and pronounced the ceremony and put him under water and the little rooster crowed. The little boy with the poodle dog waded in and said his story and put him under water and the little poodle dog came up and flopped his ears and coughed. The little fellow who had the Tommy cat waded in and pronounced the ceremony and about the time the little Tommy cat saw where it was going he began to claw his hand and he came out crying, and they held a consultation as to what to do with him, something must be done with him, so one of the little fellows said, "I'll tell you what we will do, we will just sprinkle him and let him go to hell. (Laughter)"

Now we are all trying to secure human happiness. What might be my pleasure might not be yours. You know

the story goes of two men who started out once upon a time to find the happiest man in the world, and as they went from place to place they thought the doctor as the happiest man in the world because he relieved so much pain and suffering; and as they went on they came to a minister and they thought he was the happiest man in the world because he had sent so many to the great beyond, and finally they went on and some one said, "I will tell you who the happiest man in the world is. It is Mark Twain because he made so many laugh." So they went the long road to the home of Mark Twain, and Mark Twain came to the door with his hair down over his eyes, very much in distress and trouble, and the men said to him, "We have come here to find the happiest man in the world." He said, "I don't know what you came here for. I have been feeding this fire for ten days with my manuscripts, and I can't write anything. I can't get my story to come out right," and the men said, "Tell us your trouble, Mr. Twain, maybe we can help you out." Mr. Twain said, "I am writing the love story of a couple who in their old boyhood and girlhood days were sweethearts, and the young man had left and gone out into the world to seek his fortune and after he had been gone about forty years his heart turned back to the scenes of his old boyhood and he came back to his old home. His mother was gone; his father was gone; his sister was gone; and his brother was living on the old home place. He rode around the place in an old one horse shay and finally he came to the old swimming hole and he longed to take a swim as he did in years long gone by. He hitched his horse, took off his clothes and went in and took a swim and he came out drying himself as only a country boy can do. He had on his shirt, tie and his collar and he heard the rattle of a wagon coming through the bushes, and as it came nearer he saw something must be done, and he ran and jumped in the buggy and pulled the lap robe over his lap and he tried to keep from being seen; but as the wagon came nearer he saw three parties in there; rather a healthy man and woman, and behind on an old board was a middle aged lady. As they came nearer the lady looked, and as she

looked she raised herself and said, 'Hello, John, how are you?' John saw it was the sweetheart of his boyhood days, and as they came nearer John of course greeted her, and she jumped out of the wagon and ran to his side and greeted him as only lovers do and she said, 'Your mother is gone, your father is gone, John, so you come home to supper with me.' " Mark Twain says, "I have got them this far, and now if you can tell me how in the hell I can get the breeches on this man and get him back in the buggy I will be the happiest man in the world."

You are enjoying your town here. I enjoy my town. These gentlemen all enjoy their towns, but gentlemen you who live up the State if you want to see a happy people you must come to Southern Illinois and I sincerely hope when you entertain an invitation to come next year some where down in Southern Illinois that you will come. I know you may think a cloud is resting over Southern Illinois, but we are all good people, but there is one thing if we all put our hands together we will all come out quicker than any other way, and it is for the business man to put his shoulder to the wheel to make better American homes. The bulwark of the country is the country home.

We think you will come back to southern Illinois, and whenever you do you will find a united effort in the home.

TOASTMASTER: We will have a number from the Kiwanis Quartet at this time.

THE TOASTMASTER: We have another member of our State Department that I want you to see and have a word from, and when I was thinking of introducing him I was going to say I thought you would have to take some of the bitter with the sweet, but I don't think that is the way to put it, so I will introduce Judge Jones.

JUDGE A. H. JONES: Mr. Chairman, Ladies and Gentlemen: I think a good deal like Mr. Lincoln did when he was teaching a Sunday School class. Perhaps some of you did not know he taught a Sunday School class but that

is true. And in his class was a small boy that was not very well versed in his English and in reading he came to "Shadrach, Meshach and Abednego," and when he got to that part he said, "Here comes those three dammed fellows again."

I have attended these meetings right along with Mr. O'Hair, who is well representing the dairying interests and with Mr. Stanard, the Director of Agriculture, and knowing as I do what has been done in every town or city in the State where we have held just such meetings as this, and where we are taken care of just as we are here, and I think I can say we have never been taken better care of, the Agricultural Department, the Food Department and every other department that goes with agriculture than we have in Harrisburg, and when I say that I want you to understand it is to the glory of Illinois, that what has been going on here, has been going on in other cities of the State, and as we are midway between the two oceans Illinois is the gem of the whole United States. We are proud of her and what she is doing. We are proud of her great dairy industry, of all lines of food production, her great packing industry, every thing that goes to make her great and grand, and as we meet here tonight we love to go up and down this great State and think of the fathers who crossed over the Alleghanies and came down here and planted the best civilization the world has ever seen. I wish every man and every woman in Illinois could have been here and taken in the meeting here. It has been fine. It has been grand. We have been well taken care of and it shows that Harrisburg and Saline County is wide awake and knows what is going on in the State. I want to say that I have enjoyed this meeting, and when I say that I say Illinois while she is a great State she has a city that is great; that Chicago with her great industries and this pearl valley of the Mississippi extending fifteen hundred miles wide, think of what is going on in this great State. Think of what Mr. O'Hair is doing and what Mr. Stanard is doing and what you are doing here. I want to take off my hat to your worthy newspaper man. He has got a cinch on this thing. Up in my town it



takes four or five to do the whole thing well. I understand he has the grasp of the whole thing and he gives it to you from the shoulder out. He is a great newspaper man. I have seen what your different organizations have done, and I have met them, and I have met your representatives and have been hauled around this beautiful city in his beautiful automobile, and I want to say in conclusion that this service here, this evening, this splendid banquet does well for your city and well for your district, and I want to say in conclusion, I know this country down here is adapted to the pursuit of dairying. These beautiful hills and valleys go to make up what is the best dairy country of the world. I want to see you persevere. I know you will do it. As our Chairman fears I will make a speech I am going to stop. I have several good stories to tell but I hate to compete with my friend O'Hair for I know what he will do because I know he is a past master. Let me take you in my confidence. He is a good deal smarter than you think he is. He lives out of Paris on a beautiful farm. He has got fine friends and a fine son he is training so that when he quits as State Dairyman his son shall follow in his steps. Thank you. I will vote for your son now. Will the son stand up? Mr. Smith O'Hair stands.

THE TOASTMASTER: Don't let him speak. Don't let him show W. S. up. There are a lot to speak but it is getting late. When Judge Jones started to talk I was reminded of a lot of things and organizations like his, representing all other organizations that are working hand in hand with the dairy association but that is impossible. Some one is going to say before the evening is over a word as to what Harrisburg has done for the dairy meeting. I thought this meeting would like to see the winners of this contest come up before it. Would you like to do that?

EXCLAMATION: Yes sir.

First, the boy that won the calf: Harlan Swango, Paris, Illinois. I sold subscriptions, 258.



EDWARD KEMPER: What did you do? A. I sold memberships.

What kind of a calf did you get? A. Holstein.

Was it a good one? Yes sir.

HERMAN THOMAS: What is your name? A. Herman Thomas.

What did you do? A. I sold memberships.

Where are you from? A. Georgetown.

KENT DAVIS: What is your name? A. Kent Davis.

Where do you live? A. Harrisburg, Ill.

You sold memberships? A. Yes sir.

What kind of a calf did you get? A. Guernsey.

EVELIN THOMAS: Where are you from? A. Harrisburg.

You sold memberships? A. Yes sir.

What kind of a calf did you get? A. Guernsey.

Which prize did you win? A. First. (Great applause)

TOASTMASTER: There were some prizes offered for window decoration. The first prize was awarded to Clifford Stricklin; second prize to Clark-Martin-Hawkins; third to Charles V. Parker Store No. 4; fourth to The Buckeye; fifth to The Rexall Store.

THE TOASTMASTER: I would not have the nerve to place the awards on the Milk Maids and I am going to leave it to the Chairman of the committee, Mr. Foss.

MR. FOSS: Mr. Toastmaster: I beg to report that the first prize for the individual milk maid contest was awarded to Miss Lahome Warford, of Eldorado; second prize was awarded to Miss Anna Davenport of Harrisburg; and the third prize was awarded to Miss Stella Thomas. In the group contest the first prize was awarded to the Dutch Dairy Maids.

TOASTMASTER: I am sure it is very difficult for any one to put into language words that will express our

appreciation of the hearty response that has come to all our requests. It represents a lot of effort, and more, it represents a community spirit of which you are proud.

We have one more speaker, and our program would not be complete if we did not call upon our secretary, Mr. Caven, for a word.

GEORGE CAVEN, Secretary: I would not attempt to qualify as story teller for two reasons. One is that Mr. O'Hair, Mr. Hepburn and Professor Muckelroy have gotten all the stories, and for another reason I have not had the training. Up at Galesburg it was explained how these men could tell so many stories and get away with it by explaining that Mr. O'Hair was a superintendent of a Sunday School and that Doctor Hepburn and Professor Muckelroy were teachers in Sunday Schools.

Now in the few minutes I have I want to say that some of the local committee came to me this afternoon and they were very much disappointed because the attendance of farmers was not larger than it has been so far but I do not think a large attendance at a first meeting in a community where dairying is being introduced is the most important point. The thing that strikes me as being the most important is that this dairying business has been sold to the business men of Harrisburg; that the business men are organized and now that they have gotten this idea they are in a position to put it over, and you could not expect that from the farmers because they are not organized and they really don't know, with a few exceptions, what a benefit a meeting of this kind is to them. They have to be taught and the business men of Harrisburg will have to follow this idea up in the same way they have been going on with it up to the present time. They have got to back their county adviser and their calf club and in that way you will begin to reap the benefits of this convention. You know we had a lot of farmers over there today. Some good farmers too, and if you can get a few good farmers scattered around in your community, get them started to do the right thing and get to following dairy farming in the right way why you are



Wanda Ivaline Thomas, Harrisburg, Ill., and her registered Guernsey calves won in a contest for securing largest number of memberships in the Illinois State Dairymen's Association, 1927.

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# State Dairy Association 1928 Convention

The Fifty-fourth Annual Convention of Illinois State Dairymen's Association will be held in **Marion, Williamson County, Jan. 17, 18, 19**, (Tuesday, Wednesday and Thursday) 1928. County banking and other business interests will provide a purse of \$500 for premiums in a dairy cattle exhibit. Other cash prizes will be provided by the association.

## Keep These Dates in Mind



going to become a dairy country after awhile. It is a matter of slow growth but it will come sure if you business men keep on backing up the idea and co-operate with the farmers of your country about here. Don't let any body tell you at any time that there is danger of this dairy business being overdone. There is no such danger. Here in this country our per capita consumption of butter is seventeen pounds. In Canada it is twenty-eight pounds. Think what that would mean if our per capita consumption was worked up to the per capita consumptoin in Canada. What an addition that would be with our one hundred and ten millions of people. And besides that in figures that have been recently come out from the Government, from the Bureau of Dairying, at Washington, Dr. Larson, states that it takes thirty-five million pounds additional every year to take care of the natural increase of population, and you have your Dairy Councils and your Health Boards that are teaching the necessity of a milk diet, and you have got to go mighty fast to catch up with all of that growth of consumption of dairy products. We call this dairy business a four billion dollar industry. None of us can comprehend what a billion dollars is and four billion is away out of anybody's conception. It is an immense business. It is growing and it is going to grow in this country. Now we are making about a billion three hundred pounds of creamery butter and about six hundred million pounds of country butter and creamery butter is increasing, but it is a fact that with our big increase of production we have not increased a pound since 1923. We made in 1924 about as we did in 1923 and about the same in 1925 and 1926 is going to run a little less than 1925. So you can go on in perfect confidence boosting this industry and you are not going to overdo it.

Now I just want to thank the business men here for the way they have worked for this convention and the co-operation they have given us on every need since I have been here. I have met with the requests from the committee that if there is anything that we didn't get to let them know. There has not been anything we have not had. We



have not had to make the request because it has always been provided for and I sincerely, on behalf of the association, thank the business men for all their good work.

TOASTMASTER: I am sure as the program has gone on and the evidence of good will of Harrisburg has been extended I know of no one that would have more appreciation than the President, who with Mr. Caven, the secretary, has borne the brunt of the work of putting on this convention, and I am sure he would like to say a word.

MR. W. S. O'HAIR: All good things have an ending. I have attended a good many banquets of different kinds over the State of Illinois and out of the State and I would go further to attend a banquet of the State Dairymen's Association than any other banquet I have ever attended, and especially since this man Charley Taylor sold the proposition to us up at Galesburg every thing was bound to succeed. I want to thank you folks for your wonderful cooperation. It would have made it hard for us if we had not had it. I want to thank the business men of this city, and especially your Farm Adviser because he has worked with us and co-operated in every way, and I say to your business men, stand by your Farm Adviser because by and by the coal mines will give out. Not in your life time, perhaps, but some time, but stand by your Farm Adviser; he is helping to build up a great industry that will stand for all time. I want to thank him and especially do I want to thank the ladies, Mrs. Taylor and her fine crop of children. It is no wonder that Charley Taylor's shoulders curve because he has to feed that group of children. Want to thank the folks that gave us this banquet, and if there is any one here that thinks the price is too high, if you will see Mr. Lieberman he will give you forty cents back. This banquet has been wonderful to me and I think it has to you. The hotels have treated us fine. Never have I been in a town where the hotels have treated us as cordially as they have here, and as Mr. Taylor said Southern Illinois furnishes a lot of things and one is they furnish the best looking women in the State.

TOASTMASTER: Friends when you think of the hour that is about to close we almost hesitate to declare the Fifty Third Annual Convention, so far as the banquet is concerned, closed, and if we had to rely in some tangible way to make an expression of our feelings as dairymen of the kindness we have received down here I don't know how we should express it unless we should buy some kind of a medal and make a speech, but it seems the other angle is a case where virtue is its own reward. It is a case where unselfish service exerts itself. Unselfish service will build a town; it will build a state; it will build an individual. I don't know how we could close this banquet better than to recommend to you unselfish service, and I officially declare the Fifty Third Banquet closed.



THURSDAY, JANUARY 13th

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THE ECONOMICAL VALUE OF THE SILO

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By Chas. Foss, Freeport, Ill.

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Silage furnishes succulent feed for any season of the year at low expense. For winter feeding silage is far cheaper than roots and is as efficient a feed, except possibly, in the case of animals being fitted for the show ring or Milch cows on forced test. Even in the case of Milch Cows on Official Test, roots should be used as a supplement to silage rather than a substitute.

The natural and best adapted food for the dairy cow is pasture. In the first place it is a balanced ration and in the second place it is succulent in its nature without which a cow will soon be out of condition and can not produce profitably. However there are only a few months in the year in which we have pasture in abundance. Not only does the silo furnish succulent feed during the time of the year that we have no pasture but it furnishes it anytime of the year that we need it. Milk cannot be economically produced on dry feed and with the silo it is possible to have a succulent feed the year round, so that milk can be produced the year round at a profit instead of only a few months in the year.

More than one third of the total food materials of the corn plant is in the stalks and leaves. When the crop is left in the field more than one half of the food value in the fodder is lost, and when it is cut and shocked and left in the field to cure often as much as one half of the food value in the fodder is lost. In careful tests made by the Colorado Experiment Station it was found that when corn is cured in large shocks as much as 31 per cent of the food value was

lost in the fodder while if cured in small shocks the loss was as much as 43 per cent and when allowed to cure in the field the loss was 55 per cent. It is true that even when corn is properly put into a silo there is some loss due to fermentation but the percentage is much smaller.

Another distinct advantage of the silo is that the stock will eat practically all of it even when shock corn is shredded very little of the stalks are eaten and as much as 20 to 35 per cent is wasted. By the use of the silo more stock can be kept on a farm than is possible without it.

Another distinct advantage of the silo is that the corn crop can be insiled when weather conditions do not permit of curing it in the shock, and also that the product of a given area can be stored in less space in the form of silage than in any other form. A cubic foot of hay in the mow weighing about 5 pounds contain approximately 4.3 pounds of dry matter. An average cubic foot of silage from a 30 foot silo, weighing about 39.6 pounds will contain 10.4 pounds dry matter, or nearly 2.5 times as much.

### **Type of Silo**

So far as keeping of silage is concerned it will make no difference whether a silo is constructed of wood, stone brick, solid concrete, concrete blocks, concrete staves, or vitrified tile blocks provided the walls are perpendicular, smooth and airtight. Unless the walls of the silo are smooth and perpendicular, cavities will form as the silage settles with the result that the silage adjacent to these cavities will spoil.

### **Proper Size of the Silo**

The diameter of a silo should be gaged by the number and kind of animals to be fed and the height should be determined by the length of the feeding season. The silo should be of such a diameter that during the winter months at least  $1\frac{1}{2}$  inches of the entire surface is daily removed by feeding to keep the silage from spoiling and during the summer months at least 2 inches must be removed. In

Northern Illinois and Southern Wisconsin the length of time during which silage is fed is about 200 days or seven months. For a feeding period for this length of time a silo should be no less than thirty feet high. Some of our best dairymen are feeding silage during the summer months when pastures are short.

In fact, for the highest production of milk we really have only a period of about six weeks during May and June that we do not need silage. In building a silo it is always better to build higher than 30 feet so that not only sufficient silage for winter feeding can be stored but also for summer feeding when needed. A ten foot silo will be about right for 12 head of cows and young stock and for 20 to 25 head of cows and young stock a 14 foot silo will be required.

### **Crop for the Silo**

There is no better crop to put into a silo than ordinary field corn. It is always best to use the largest variety of corn that will mature in a given latitude.

Fifteen or twenty years ago when the silo first came into general use it was a common practice for dairymen in the northern part of the state to use a large, late variety of southern corn as a crop for the silo. While this variety of corn made more tons of silage per acre it did not make as much total dry matter per acre as would have been the case had a variety of corn been planted that would have matured. Corn planted for the silo may be planted a little thicker than it is planted for grain only, but it should not be planted so thick that it will not develop good sized ears. In planting a crop for the silo the aim should be to produce the maximum amount of total digestible nutrients per acre. Silage made from immature corn also contains more acid than when the corn is nearly matured. In planting a crop of corn for the silo it is a good practice to plant some cow peas or soy beans with it. More tons per acre can be produced by so doing and the beans or peas will furnish protein to balance the silage.



### **Time to Harvest**

Corn continues to increase in feeding value throughout the season. There is more food value in ripe corn than in the glazed or milk stage. However, if we wait until the corn is ripe before we fill the silo much of the leaves will be lost in harvesting and water must be added so that the silage will settle sufficiently to exclude the air so it will not mold. All things taken into consideration, the best time to harvest a crop of corn for the silo is when it is well glazed and the lower leaves have begun to ripen. It often is the case that one can not fill the silo when the corn is at the proper stage of maturity to make the best silage on account of not being able to get a machine to do the work or sometimes corn freezes before it is properly matured. Whatever may be the cause, good silage can be made from either over ripe or fostered corn provided sufficient water is run in with the silage so it will pack well and exclude the air.

### **Yield Per Acre**

The yield of silage per acre depends entirely on the kind of a crop of corn we raise. It is usually estimated that a corn crop that will yield 50 bushels per acre will make from 10 to 12 tons silage.

### **Filling the Silo**

In filling a silo the corn is usually cut about  $\frac{1}{2}$  inch long. The silage will settle better and stock will eat it all up. The corn and leaves should be evenly distributed in the silo so it will settle evenly. On account of the friction the silage next to the walls will not settle as well as in other parts of the silo, material here should be kept slightly higher than in the center and should be especially well tramped.

### **Sealing the Silo**

It is a good practice to snap the ears from the last two loads of corn before putting it into the silo as this amount

usually spoils in sealing. The ears if left, would only be wasted. If the silage is tramped and water added every day for a week after the silo is full molding will be reduced to a minimum as the heat and moisture will soon decay the silage which seals the silo and molding stops.

### **Cost of Silage per Ton**

The cost of silage per ton will vary, depending on the crop of corn to be put into the silo, rent of land and buildings, labor and use of machinery. A 50 bushel crop of corn put into the silo when corn is worth \$.60 per bushel will make the silage cost about \$4.50 per ton, while when corn is \$.80 a bushel the silage will cost about \$6.00 per ton.



## TREASURER'S REPORT FOR YEAR ENDING

JULY 1, 1927

## Receipts

1926

July 1, Balance on Hand	-----	\$ 63.02
Oct. 1, Received from Geo. Caven	-----	100.00
Dec. 21, Received from Geo. Caven	-----	72.00
Dec. 31, Received from Geo. Caven	-----	63.00

1927

Feb. 15, Received from Geo. Caven	-----	336.00
Mar. 29, Received from Geo. Caven	-----	24.60
June 17, Received from Geo. Caven	-----	10.94

Total Receipts	-----	\$669.56
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## Disbursements

1926

Voucher No. Amount

Sept. 29, Pioneer Creamery Company, calf in 1925-1926 membership con- test -----	4	\$125.00
Oct. 6, Hugh Curtis Given, Postage and Mailing Reports -----	5	20.00
Oct. 16, Chicago Produce Co., Stamps ad- vanced -----		8.10
Dec. 21, Pioneer Creamery Co., Freight on Calf -----	7	18.58

1927

Jan. 6, Mrs. Edna C. Given, Postage and mailing reports -----	8	35.10
Jan. 6, Chicago Produce Co., Express and Telegrams -----	9	1.27
Feb. 17, Hoards' Dairyman, Subscriptions given with Memberships -----	10	195.53
Feb. 17, N. F. O'Hair, Work at Harrisburg Convention -----	11	38.25

Feb. 18,	Kressman & Company, Printing Programs \$142.00, Express, \$2.13 -----	12	144.13
Mar. 29,	Kressman & Company, Envelopes —W. S. O'Hair and Geo. Caven_	12	8.50
Apr. 18,	Jesse H. Swango, Expense—Harlan Austin, Railroad \$22.50, Board, \$5.55 -----	13	28.05
Apr. 18,	Harlan See, Harrisburg Expense_	14	22.05
June 2,	H. B. Corrie, Contribution to Agricultural Club -----		25.00
Total Disbursements -----			<u>\$669.56</u>
Total Cash Received for the year to July 1, 1927---			\$669.56
Total Disbursements for year to July 1, 1927-----			<u>\$669.56</u>
Balance on Hand July 1, 1927 -----			None

Respectfully submitted,

CHAS. FOSS,  
Treasurer.

## SECRETARY'S REPORT

### Receipts

Balance from previous year -----	\$ 173.75
Contributed -----	505.00
Memberships -----	1,475.95
Life memberships (not counted in membership total) -----	65.12
Advertising -----	121.00
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Total -----	\$2,340.82

### Disbursements

Stamps (\$60.00 Mailing report) -----	\$ 94.44
Travel -----	31.85
Hotel (Meeting in Chicago with W. S. O'Hair and others) -----	30.60
Treasurer Foss -----	606.54
Express Freight (Includes delivery of calves -----	40.15
Telegrams, Telephone -----	5.35
Taxi -----	1.75
Paid for calves -----	1,094.88
Paid for prizes -----	85.00
Tent at Harrisburg -----	50.00
Printing, Engraving -----	75.42
Dairy Farmers (Subscriptions) -----	26.70
Silver cup and Engraving -----	32.30
Exchange on Checks -----	4.21
Miscellaneous -----	2.50
Prof. Morrison -----	50.00
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Total -----	\$2,231.69
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Balance -----	\$ 109.13

GEO. CAVEN,  
Secretary.



### RESOLUTIONS ADOPTED

We, the committee on resolutions, of the fifty-third annual convention of the Illinois Dairymen's Association, in convention assembled, at Harrisburg, Saline County, Illinois, this thirteenth day of January, 1927, are pleased to submit, for the consideration of the association, the following resolutions :

Whereas this, the fifty-third annual convention of the Illinois Dairymen's Association, has proven highly beneficial and delightfully entertaining, and whereas various agencies have contributed to the outstanding success of this meeting, therefore be it

Resolved that the Illinois Dairymen's Association hereby tenders its sincere thanks and its hearty appreciation for the splendid efforts put forth in behalf of this session by the following:

The Rotary and Kiwanis Clubs of the city of Harrisburg, and the business concerns and individuals, and other public spirited citizens of the community, and the Saline County farm bureau, staunchly behind the farm adviser, I. E. Whitchurch, for the substantial support and splendid efforts, to which, in a great measure, the success of this session is due;

The leaders and teachers engaged in vocational agricultural instruction, and to the agricultural students of the high schools participating in the dairy cattle judging contest, for that helpful, educational feature of the program;

The University of Illinois, for the service rendered through the competent talent provided by Prof. C. S. Rhode, for the highly important work of passing upon the merits of the cattle on exhibition, and for the dissemination of so much valuable information by that institution upon the various problems that confront the dairymen of Illinois;

The speakers—collectively and individually, for the many interesting addresses they have delivered, making of this meeting, and entertaining, educational short course in dairy farming;

The Harrisburg Daily Register, and to the press of the state, generally, for the publicity given this session through their columns;

And whereas this, the fifty-third annual convention is the natural outgrowth of years of continuous efforts on the part of the past officers of the association, therefore be it resolved that the secretary be instructed to extend to the former president, J. P. Mason of Elgin, to H. P. Irish, now residing in California, and to all who have served as officers or directors of the association and who are now among the living, the greetings of the association, and an expression of recognition for their foresight and sound judgment as is manifest in their valuable service to the dairy industry of Illinois, in founding and perpetuating this organization.

And, whereas the Illinois Dairymen's Association, in years past has and at this time, does recognize in the present administration of the government of the state of Illinois, a great power for good, thoroughly competent and naturally inclined to render every possible service to the agricultural interests of the state, therefore be it resolved that this association, representing 2000 members, the leading dairy farmers of the state of Illinois, unreservedly endorse the administration, most helpful in every way possible, to our industry.

And, whereas in the year 1925, the Hon. Len Small, as Governor of the state of Illinois, saw fit to appoint one of our number—a man who had grown up in the farming and dairy business, the Hon. Stillman J. Stanard, as Director of the State Department of Agriculture, therefore be it resolved that this association commend the Governor upon the wisdom of his choice, which has been so thoroughly proven by the unprecedented success of the State Department of Agriculture, under his direction, and be it further resolved that this association be placed on record as heartily in favor of the continuation of the splendid service the state is now rendering the dairy industry through the department of agriculture, under the able guidance of the present director, Hon. Stillman J. Stanard .

And, whereas legislation enacted has placed upon the State Department of Agriculture, the problem of livestock sanitation and disease control that is now presented in the

form of bovine tuberculosis, and whereas the gigantic task of eradicating this disease from the dairy herds of Illinois is progressing as satisfactorily as conditions permit, therefore be it resolved that this association fully endorse the methods now employed for the eradication of bovine tuberculosis, and further, that we urge all owners of dairy and breeding cattle within the state to cooperate to the fullest extent with the State Department of Agriculture, to the end that this infection may be speedily removed from the herds of Illinois.

And, whereas the State of Illinois is at this time threatened with an impending invasion of an insect pest, the European corn borer, and, as has been experienced in states wherein this pest has wrought much damage, regulatory measures, promulgated and enforced by the chief executive and the State Department of Agriculture, will become necessary in order to reduce as much as possible, the loss this pest may cause, therefore be it resolved that this association voice the confidence of its membership in the ability of the state administration and in the Illinois, and the Federal Departments of Agriculture, to render the strongest protection that is possible, against the inroads of this destructive insect, and in the University of Illinois, from which, through exhaustive, scientific research, will evolve invaluable contributions to the fund of knowledge, so essential to a successful warfare against this foe.

And, be it further resolved that this association urge the farmers and the citizens of Illinois as a whole, to cooperate to the fullest extent with the efforts that these agencies may deem best in order to unitedly combat this enemy to corn production.

And be it further resolved that, with this assurance, any tendency to develop within the state any panicky inclination to desert agriculture in its hour of need be summarily suppressed.

In further recognition of the many agencies and individuals who have, in various ways, contributed to the success of this organization, and have assisted in making this convention a success, be it resolved that copies of these resolutions, as adopted by this association, be spread upon

the records of the proceedings of this convention, that copies be forwarded by the secretary to Hon. Len Small, Governor of the State of Illinois, to Hon. Stillman J. Stanard, Director of the State Department of Agriculture, and to other interested individuals, and that copies be submitted to the press, with leave to print.

Respectfully submitted,

STANLEY G. SMITH, Pinckneyville  
Chairman

L. A. WASSON, Harrisburg

B. J. WILEY, Springfield

Committee on Resolutions.

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### REPORT ON NOMINATIONS

We, the nominating committee, desire to make the following nominations for the officers of the Illinois Dairy-men's Association, for the ensuing year:

For President, W. S. O'Hair, Paris, Ill.

For Vice-president, Stillman J. Stanard, Springfield.

For Treasurer, Charles Foss, Freeport.

For Secretary, George Caven, Chicago.

For directors, we recommend that the present board of directors be elected for the ensuing year.

(Present board of directors.)

Stillman J. Stanard, Springfield,

Charles Foss, Freeport,

T. P. Smith, Danville,

W. S. O'Hair, Paris,

C. M. Filson, Salem,

John Stelle, McLeansboro,

Jas. P. Phillips, Sesser,

George Caven, Chicago,

Harlan See, Paris,

Respectfully submitted,

LOUIS E. HAZLETT, Chairman

J. H. SWANGO,

COL. C. C. MINER.

By motion duly made and seconded the report was accepted and the ticket declared elected for the ensuing year.

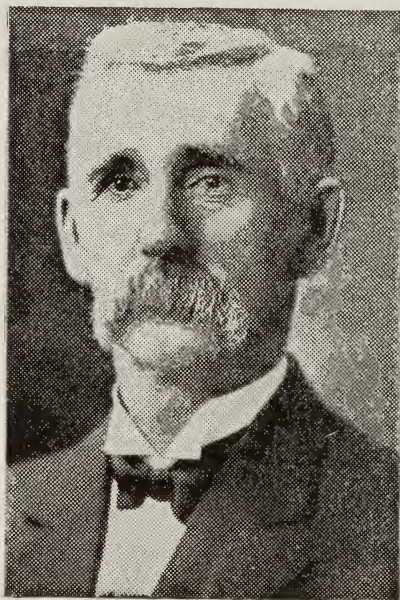


## JUDSON P. MASON

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In late April, 1927, Judson P. Mason passed away.

His passing removed from Illinois a leader in dairy farming who had been conspicuous in state dairy work for fully 50 years. Mr. Mason was a conspicuous success; his dairy farm returning him good profits every year.



Mr. Mason died in his farm home that was his birthplace and the home of his father, who got the land as a government grant in 1845. He was always a farmer, both dirt and dairy farmer, and proud of that fact. He delighted to tell of an experience in a city where he knew no one and needed money. He went to a bank and asked to have a check cashed, saying he was a dairy farmer in the Elgin district. It happened he was talking to the president of the bank. Mr. Mason's hands showed him to be a hard worker and that helped him in the banker's estimation, but when the banker noticed evidence of the cow stable on Mr. Ma-



son's shoes he decided he was a man to be trusted and cashed his check.

We said Mr. Mason had always been a farmer, but there was a period when he was employed in the first cheese factory established in the Fox river valley and in Elgin.

Mr. Mason was the first president of Chicago Milk Shippers Association, from which grew the present Milk Producers' Association, and he was famous for being able to show the largest percentage of profit in milk production.

For 12 years or more he was president of Illinois State Dairymen's Association. He was on the program at the association's second annual convention and a regular attendant and worker for the dairy industry up to and including the association's fifty-first annual meeting two years ago. He was close to 77 years of age, having been born March 31, 1850. He was the first president of Kane County Farm Bureau and for 22 years was a director and worked in Illinois Farmer's Institute. He spoke on farm dairying in every part of Illinois, and for years had far more of these speaking dates than he could fill.

He was popular as a speaker, not because of any oratorical ability, but because he told in plain words the work he was doing, how he did it and the results of the work on his own farm, or rather farms, because he had several. The writer has heard him tell fellow farmers many times that there was no better or more profitable business than farming, and especially dairy farming, if done as it should be done by the united force of hands and head. It meant work, he would say, but work is necessary to success in any line of effort, and he would add that there was no place or occupation where a young man, if he would apply himself, could be surer of success than on a farm.

He made farming pay in large per cent, and for the last 15 years of his life was a director of the Home National Bank of Elgin. He was one of the organizers of the old Elgin Board of Trade and prominent in its affairs during its early years, serving some years as treasurer.

He was an old-fashioned man—no frills about him—

at home wherever he happened to be, competent and thorough whatever his job, genial, absolutely honest, fair in his judgment of men—in fact, a man that every one enjoyed meeting. Probably because of his early struggles he failed to take life easy when he acquired wealth. He worked among his herds and in his fields as hard as any of his hired help, answered every call he could when asked to speak at a farmers' meeting, and was out many times taking long trips into sections where accommodations were crude, both in traveling and hotels, when he should have been resting quietly at home.

He gave his services to the government during the World War, serving in the field which he had made his life work. His was a long and useful life.



## DAIRY-HERD IMPROVEMENT THROUGH COOPERATIVE BULL ASSOCIATIONS

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(By J. C. McDowell, Dairy Husbandman, U. S. Bureau of  
Dairy Industry)

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The ultimate goal of bull-association work is not better bulls but better cows. It is true, however, that these better cows can come only through the use of better sires. In many cases, the cheapest and best way to get first-class purebred bulls is through the work of the cooperative dairy-bull association. This is a farmers' organization composed of at least three divisions called blocks. Its chief purpose is the breeding of better dairy cows through the joint ownership, use, and systematic exchange of three or more prepotent purebred dairy bulls with high-producing ancestry. If possible, these bulls should be better bred and better individuals than the best cows in any herd of the association.

Few dairymen are so situated financially that they can afford to purchase a really first-class purebred bull for a medium-sized or small herd of dairy cows; but every dairyman, regardless of the size of his herd or the condition of his pocketbook, can well afford to own a share in such a bull. In fact, the small dairyman with only a few cows from which he obtains his income is the very one who needs a high-producing dairy herd. He is the man who can least afford the great losses that come from carelessness in breeding. Though the bull association is adapted to purebred as well as grade herds, to large herds and to those of smaller size, to herds of high production and to those of low production, it is especially adapted to the building up of high-producing dairy herds in those districts where the herds are small.

When the 1920 census was taken only 25 per cent of the dairy bulls of the United States and only 3 per cent of

all the dairy cattle were purebred, and there was only 1 purebred bull to each 23 dairy farms. That is not a good record for a great dairy country. To improve this condition, the first step should be to eliminate all bulls except the purebreds; the next, to prove all the purebred bulls through the records of their daughters and to eliminate all whose daughters are unsatisfactory. The bull association is one of the means by which these results may be brought about.

### **How Bull Associations Have Grown in Number**

The growth of a movement does not always prove its value; but in the case of dairy-bull associations, the continued and almost constant growth since the work began is at least some indication of what the dairymen of this country think of this method of cooperative breeding.

The work began in Michigan in 1908. Before the end of that year there were 3 bull associations, all in that State. In 1910 there were 9 associations, 8 in Michigan and 1 in Minnesota. In 1915 there were 15 associations in 7 States; in 1920, 123 associations in 30 States; and on January 1, 1927, 248 associations in 33 States, Pennsylvania ranking first with a total number of 43. Idaho was second with 31. Minnesota was third with 20.

On January 1, 1927, the membership of the 248 associations was 6,057. These associations owned 1,117 bulls, 8,749 purebred cows, and 30,115 cows that were not purebred. The total number of cows was 41,174, including 2,310 cows whose breeding was not reported. The growth of these associations in number has not been especially rapid but each year has showed a gain and the results have been very satisfactory.

### **What Bull Associations are Accomplishing**

The growing interest in bull-association work has come largely because this is a practical and economical way of building up better dairy herds. The appearance of the daughters indicate the value of the sire, but their production records prove his value. This is especially true when

their records have been compared with the records of their dams.

Such comparison of records, of course, can not be made until some of the daughters are old enough to have completed or nearly completed their first lactation periods. Because of this delay, cow-testing-association records of the dams and daughters in bull-association herds have become available slowly. So far, however, they have shown that the bull association has been successful in its main purpose, the building up of better herds of dairy cattle.

There are 155 yearly production records of the daughters of bull-association bulls now available from 12 States. These have been compared with the yearly records of the dams of the daughters. These are not the records of selected daughters but of all those that have been tested and whose records have been compared with the records of the dams. On the average the dams produced 7,112 pounds of milk and 299 pounds of butterfat a year, and the daughters 8,071 pounds of milk and 342 pounds of butterfat. On an average the daughters excelled their dams 13.5 per cent in milk production and 14.4 per cent in butterfat.

These percentage gains would not mean much if the dams were low producers, but it requires a bull much above the average purebred bull to raise the production of his daughters above that of dams that produce each year approximately 7,000 pounds of milk and 300 pounds of butterfat. In order to make a fair comparison between the records of immature and mature cows the records of all immature cows are figured to maturity. For cows 2, 3 and 4 years of age, this is done by multiplying the records made at these ages by 100 and dividing the result by 70, 80 and 90, respectively.

Some of the sires were very outstanding. One was mated with dams having an average yearly milk production of 9,300 pounds and an average yearly butterfat production of 347 pounds. The seven daughters of this bull produced 57 per cent more milk and 44 per cent more butterfat than the average of their dams. More remarkable still, every daughter excelled her dam.



Another bull was mated with cows having an average yearly butterfat production of 254 pounds. His six daughters averaged 38 per cent more butterfat than that quantity. Another sire was mated with dams having an average yearly butterfat production of 256 pounds. His five daughters produced 37 per cent more butterfat than their dams.

Not every bull-association sire increases the production of his daughters over that of their dams. Records are now available for 12 bull-association bulls, each having five or more daughters. Among these 12 there are 9 whose daughters produced more milk and butterfat than their dams and 3 whose daughters produced less. It is interesting to compare two of these sires. One was mated with cows having an average yearly milk production of 7,419 pounds, yet his daughters on an average excelled their dams by 1,645 pounds. The other bull was mated with cows having an average yearly milk production of 7,306 pounds, and his daughters produced on an average 1,038 pounds less than their dams. In each case the average milk production of the dams was about equal, but there was a big difference in the average production of the daughters. Certainly there is a great difference even in purebred bulls, and the production records of the dams and daughters show how great that difference is.

### **The Daughters of a Hundred Sires**

Cow-testing-association figures have furnished the yearly production records of many pairs of dams and daughters. From these figures a hundred dairy sires have been proved as far as five or more pairs of dam and daughter records will prove a sire. Included among these proved-sire records are the records of the daughters of the 12 bull-association bulls already mentioned. In every case the yearly record of the dam has been compared with that of the daughter after all records of immature cows were figured to maturity. Altogether there were 641 daughters whose records were compared with those of their dams.

On an average the dams produced 8,084 pounds of

milk and the daughters 8,752 pounds; the dams 349 pounds of butterfat and the daughters 371 pounds. On an average the daughters excelled the dams in milk production by 8.3 per cent and in butterfat production by 6.3 per cent. The daughters of 67 sires excelled their dams in production of milk, and the daughters of 72 sires excelled their dams in production of butterfat. Among the hundred sires there were 33 whose daughters failed to equal their dams in yearly production of milk and 28 whose daughters failed to equal their dams in yearly production of butterfat. Some of these bulls might have increased the production of herds having a lower production average; perhaps many of them would have increased the production of an average herd; but only the sires that raised the production of their daughters above that of the dams of the daughters were worthy to be in the herds in which they were used.

### **Is the Proposition Bankable?**

If money used in any safe investment will earn more than the interest charged, the proposition is said to be a bankable one. Bankers have lent money to farmers many times to help finance the purchase of purebred bulls. When two bull associations were organized in a dairy district in western Pennsylvania a few years ago, one of the local banks helped to finance the purchase of bulls. Not a dollar of these loans was lost, because the money was lent to progressive farmers who invested it in a paying proposition.

It is not easy to determine exactly how much the best association bulls earn for their owners because so many factors must be considered, but it is very easy to show that these bulls return much more than ordinary interest on the money invested in them. In order to demonstrate the possible money value of good bulls, the records of the 6 best sires of the 12 bull-association bulls mentioned above were arranged in the order of the gain in butterfat production of the daughters over that of the dams of the daughters. The results are shown in Table 1.

TABLE 1.—Estimate value of good proved sires, based on actual records of dams and daughters

Number of sire	Average butterfat production per cow		Average gain of daughters over dams	Number of daughters	Value of gain at 40 cents per pound butterfat		Amount of money on interest at 6 per cent to earn as much as the gain of the daughters
	Dams	Daughters			For one daughter	For all daughters	
	Pounds	Pounds	Pounds				
1.....	347	500	153	7	\$61.20	\$428.40	\$7,140.00
2.....	254	350	96	6	38.40	230.40	3,840.00
3.....	256	351	95	5	38.00	190.00	3,166.66
4.....	185	260	75	11	30.00	330.00	5,500.00
5.....	156	228	72	8	28.80	230.40	3,840.00
6.....	250	308	58	5	23.20	116.00	1,933.33

The average production of the daughters of each sire was multiplied by 10 to determine what the total would be for 10 daughters, but these sires may eventually have many times that number of daughters. Figuring on the gains of 10 daughters for each sire the first sire earns 6 per cent annually on \$10,200; the second, 6 per cent on \$6,400; and the third, 6 per cent on \$6,333.

The completed tabulation shows that the average gain of all the daughters of the 12 sires was 52 pounds of butterfat a year, or 520 pounds for 10 such daughters. At 40 cents a pound the value of the increased production would amount to \$208 for the 10 daughters, or \$2,080 if the sire had 100 daughters which averaged 52 pounds of butterfat more than their dams. At 6 per cent it would require \$34,667 to earn \$2,080 interest in a year.

To be sure, since some of these bulls will prove unsatisfactory and the others will grow too old for service, all will finally have to be replaced; but long before this must be done most of them will have earned many times their original cost. Not only do these bulls raise the average production of the daughters above the dams, but they also have a tendency to raise the average level of the production of their descendants over a period of many generations. Certainly, if there are any farm organizations that merit the confidence of bankers, the cooperative bull association must be very near the top of that list.

### **Testing for Production**

Every well-managed bull association should provide some means of keeping the production records of the dams and daughters. One of the best ways to do this is through the work of the cow-testing associations. For a long time cows have been culled and sent to the butcher because of their low cow-testing-association records. It is now possible to cull the bulls and send them to the butcher because of the low cow-testing-association records of their daughters. The bull that does not get high-producing daughters is safe from the butcher a little longer than the low-producing cow, but he is not half as safe now as he once was. At last a way has been found to test him through the records of his daughters. For him the cow-testing association is a court of last resort. From its decision there is no appeal.

### **Not More But Better Dairy Cows**

Proved bulls insure dairy-herd improvement. This manifests itself in larger production per cow, which increases the net income from the same number of cows or brings the same net income from a smaller number. In any case the farmer is the gainer. The figures in the following paragraph clearly show what may be gained by breeding up a herd of high-producing dairy cows.

In one instance there was a herd of 14 cows whose average yearly butterfat production per cow was 137 pounds, with an average income of \$25 over cost of feed. Another herd of 8 cows had an average yearly butterfat production of 314 pounds per cow and an average income of \$87 over cost of feed. The 14-cow herd had a total income of \$350 over cost of feed, and the 8-cow herd, \$696. With one more than half as many cows the smaller herd had approximately twice the income over cost of feed.

The owner of the smaller herd could sleep an hour longer every morning and finish the feeding and milking as soon as the owner of the larger herd. In the evening he could finish his work and go to a movie while the owner of the larger herd was still busy feeding and milking his 14



low-producing cows. Not only that, but the owner of the smaller herd would have \$346 more to spend each year on necessities or on luxuries. Why anyone will milk and care for 14 poor cows when by joining a bull association he can breed up a herd of better cows is difficult to understand.

### **Bull Association Keeps the Best**

Through the system of transferring bulls from block to block, as will be explained under the next heading, the bull association makes it possible to keep all the bulls until their daughters have made records and until the records of dams and daughters have been compared. That system makes it possible to keep all the proved bulls as long as they live or are fit for service.

The well-managed bull association not only keeps the good bulls, but it culls the bad. No intelligent farmer would plant inferior seed corn if good seed were available; neither would he knowingly use a bull that would lower the production of his dairy herd. Until recently no simple, practical method was used by which bulls are tested for their ability to transmit high production to unselected daughters. Now there is no excuse for not thus testing the sires that head our dairy herds.

### **How to Organize**

If the dairymen of any community desire to organize a bull association they should obtain from their county agent, their State agricultural college, and the United States Department of Agriculture all the available literature on the subject, including copies of the constitution and by-laws in use in well-organized bull associations. After getting all the information possible on the subject of bull associations, they should consult with the county agent and the dairy extension field men from the State agricultural college regarding the details of organization and a canvass for membership.

If the membership canvass shows that an association can be organized in the community, a meeting of those inter-



ested should be held at which time the association may be formally organized. The State dairy extension field man should also be present at that meeting and act in an advisory capacity regarding the various steps to be taken in forming a satisfactory organization.

The constitution and by-laws adopted by the association should be brief and written in simple language. Copies of those in use in well-organized and successful bull associations may be obtained from the extension department of the State agricultural colleges, or from the Bureau of Dairy Industry of the United States Department of Agriculture.

### **Who Should Join**

Most of the 248 bull associations now in operation are in those districts where the herds are small. These districts are the natural places for the work to begin because the entire cost of a well-bred bull is high per cow to the owner of the small herd. It does not follow, however, that the bull association is not adapted to those districts where the dairy herds are large. The dairy-bull association is adapted to every dairy district and to every farm on which dairy cows of any kind are kept.

Every dairyman in this country is a prospective member of such an organization. He has much to gain and nothing to lose by joining. If the owners of small herds can pool their small resources and buy good bulls, the owners of large herds can pool their larger resources and buy better bulls, while the owners of the best-bred dairy herds can pool their still greater resources and buy the best bulls available. Even if the financial question is no part of the problem, the farmers may work out some method of exchange suitable to their conditions and be greatly benefited thereby.

As a rule, it costs but little more and sometimes less to own a share in a well-bred dairy bull than to be the sole owner of an ordinary scrub. Not only is the original cost less but also the cost for feed and care is apportioned among all the members and falls lightly on each one.

Though the cost of feed and care for the bull is apportioned among the members, the bulls are purchased and owned by the entire association.

Such organizations not only make it possible to purchase better bulls but also to use these good bulls much more extensively than they have been used in private ownership and to keep them as long as they are fit for service.

Certainly every cow-testing association might well consider the idea of organizing within itself a bull association. With equal force it may be said that every bull association should organize into an up-to-date cow-testing association, if possible. The cow-testing association herds need better breeding, and the bull-association herds need testing. These two associations working together can soon lift all our dairy herds to a higher level of production.

### **Bull-Association Blocks**

A typical bull association consists of five blocks, each containing one or more herds. At least one bull is assigned to each block. In order to prevent inbreeding each bull is advanced to the next block in the circuit at the end of every two-year period.

In the well-managed bull association the cows with which the bulls are mated should be tested for production

In the well-managed bull association the cows with which the bulls are mated should be tested for production and their records kept on file to be compared later with the production records of the daughters. As soon as the daughters freshen their production records are kept, and as their lactation period advances the record of each is compared with the production record of the dam. Even if there is no cow-testing association to do the testing, the owner of the herd may keep a private record of the feed cost and production of each cow in his herd.

As soon as enough dam and daughter records have been obtained and compared, the association decides which bulls shall be kept and which shall be sent to the butcher.

The money received from the sale of discarded bulls goes into the treasury of the association, and other bulls are bought to replace those that have been discarded. All the members of the entire association are assessed to meet any additional expense. Because all share this cost, the burden is light for everyone.

### **Selection of Bulls**

After the association has decided on the number of bulls to buy and the price limit, the committee appointed to purchase bulls should buy the best bulls obtainable at the price. It is unfortunate that as yet but few proved bulls are available.

The committee should endeavor to choose well-formed bulls descended from exceptionally high-producing dams and granddams. If this be done, the probabilities are that selected bulls will transmit to their offspring the high-producing qualities of the ancestors. Eventually the time will come when bulls will be selected on the records of descendants as well as on those of ancestors. When that time comes dairying will have completely eliminated another piece of guesswork.

### **One Breed for Each Association**

In the well-organized bull association only one breed of bull is used. As the bulls are shifted from block to block every two years it is essential that all should be of the same breed, and it is advisable that as far as possible all should be of like quality. Using bulls of the same breed and of like high quality gradually builds up herds of the same or similar breeding. Naturally, buyers looking for animals of this breed are attracted to this district.

A dairyman in northern Wisconsin kept a herd of Guernseys in a Holstein district, believing that he would have a monopoly of the business in that breed. He did have a monopoly, but he was greatly disappointed because buyers did not come his way. The buyers went to those districts where there were many Guernsey herds.

When buyers of dairy cattle want Guernseys, or Jerseys, or Holsteins, or Ayrshires, or Brown Swiss they go to those districts where there are large numbers of animals of their chosen breed. Therefore, by encouraging the building up of many herds of the same breed in a community the bull association brings a better sale of surplus stock.

### **A Great Loss in Dairying**

Probably the greatest loss in dairying results from killing a large percentage of our best purebred bulls before their true value has been determined through the production records of the daughters. The well-managed bull association prevents this slaughter in its members' herds. This work should be extended by organizing many bull associations. Instead of hundreds, these organizations should be numbered in tens of thousands, and they should extend into every agricultural district in this country.

One reason given for killing these bulls is that they had become a dangerous menace to human life. There is a saying that it is usually the so-called harmless bull that kills his keeper, and that "the only safe bull is a dead bull." It may be truthfully said that the only safe living bull is the one that is kept continually in a properly built bull pen. Painsstaking precautions should therefore be used at all times. Plans for a pen that will actually keep the bull where he can do no harm may be obtained from the State colleges of agriculture or from the United States Department of Agriculture.

There may be other ways of saving good bulls than through the work of the bull associations; ways that are better adapted to certain dairy districts and that will appeal to many dairymen, but the goal is always the same: The saving of all well-bred sires until their true value is known in order that the dairy herds may be improved.

The plan that will bring about this desired result will accomplish much for the dairy world. It will cut the cost of production on our dairy farms and gradually but certainly eliminate a great loss in dairying.



### Looking Forward

Considerable progress has been made in dairying by selecting for breeding purposes the descendants of high producers, but the most rapid progress can only be made by looking forward as well as backward. The records of the first five or six daughters determine with some degree of certainty the true value of a dairy bull; and it is doubtful whether any bull, regardless of his breeding, should head any well-bred herd until a number of his daughters have been tested and found to have much higher records than their dams. Until such time, however, as good proved sires are made available, bulls with high-producing ancestry must be relied upon. When all dairy bulls are required to pass through a probationary period before they are allowed to head a dairy herd, when only proved sires are allowed to become the sires of many daughters, and when the best of these sires are used to their full capacity, then, and not until then, may a great advance in the economical production of our dairy herds be expected.

The means of making this work successful are now at hand. The cow-testing association, at little cost, keeps the records of dams and daughters; and the bull association makes it possible to keep a good dairy sire for 10 or 12 years, or as long as he is fit for service without danger of inbreeding. Without fail, these two associations, when properly managed, will in a few generations transform poor scrub herds into herds of high production.

### Summary

The ultimate goal of the bull association is better cows.

The cooperative dairy-bull association is a farmers' organization whose chief purpose is the breeding of better dairy cows through the joint ownership, use, and systematic exchange of prepotent purebred dairy bulls of high-producing ancestry.

The dairyman of limited means is the one who can least afford the great losses that come from carelessness in breeding.

The first bull association in the United States was or-



ganized in Michigan in 1908. There are now 248 bull associations in 33 States.

A study of the records of the daughters of bull-association bulls showed an average yearly mature production of 8,071 pounds of milk and 342 pounds of butterfat. In milk production the daughters excelled the dams by 13.5 per cent and in butterfat production by 14.4 per cent.

Some of the sires are very outstanding. One sire was mated with cows having an average yearly milk production of 9,300 pounds and an average yearly butterfat production of 347 pounds, yet his seven daughters from these cows excelled their dams by 57 per cent in milk production and by 44 per cent in production of butterfat.

In many localities the banks are helping to finance the purchase of better dairy sires. One bank helped to finance the purchase of bulls for two bull associations.

Through the system of transferring bulls from block to block, the bull association makes it possible to keep all proved bulls as long as they live or are fit for service.

The State agriculture colleges and the Bureau of Dairy Industry of the United States Department of Agriculture will furnish information regarding the organization of bull associations.

In answer to the question, who should join a bull association, every dairyman is a prospective member. The bull association is adapted to every locality and to dairy herds of all sizes.

The typical bull association consists of five blocks to each of which one bull is assigned. All the bulls are owned by the association.

If possible proved bulls should be selected. When this is impossible the bulls should be selected on the production records of dams and granddams.

In a bull association the bulls must all be of the same breed.

Much progress has been made by selecting bulls on the records of their dams and granddams. The most rapid progress can not come until dairy sires are selected on the production records of their daughters.



1. Herman Thomas, Georgetown.

2. Harlan Austin Swango, Paris.

3. Wanda Ivaline Thomas, Harrisburg.

4. Champ Davis, Harrisburg.

5. Elmer Colclasure, Flora.

6. Edward Timpner, Pinckneyville.

Prize winners in the membership contest for Illinois State Dairymen's Association, Harrisburg, Saline County, Ill., Jan. 1927



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shall St.
- ASHER, CHAS., Paris, 705 Mar-  
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     R. F. D. 3.  
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     R. F. D. 4.  
 BASHAM, J. G., Harrisburg,  
     R. F. D. 5.  
 BEAN, CHAS. M., Eldorado,  
     R. F. D. 3.  
 BEACH, IVY, Vienna.  
 BEACH, J. O., Vienna.  
 BEACH, MONROE, Vienna.  
 BLACKARD, W. J., Harrisburg,  
     West Poplar St.  
 BERRY, J. H., Harrisburg, R. F. D. 4.  
 BERRY, H. O., Harrisburg,  
     R. F. D. 4.  
 BOURLAND, V. D., Harrisburg,  
     R. F. D. 3.  
 BARTER, TOM, Harrisburg,  
     R. F. D. 1, Box 128.  
 BAKER, O. C., Harrisburg, .  
     R. F. D. 1.  
 BAKER, C. E., Galatia.  
 BARGER, HERBERT, Stonefort.  
 BUTLER, TAYLOR, Harrisburg,  
     R. F. D. 3.  
 BARNES, S. A., Omaha, Nebr.,  
     R. F. D. 3.  
 BRAMLETT, CALVIN, Carrier  
     Mills, R. F. D. 1.  
 BRIDE, WM., Villa Ridge.  
 BIRD, L. C., Galatia, R. F. D. 2.  
 BARNES, ALLEN, Harrisburg.  
 BOND, MRS. JOHN, Galatia,  
     R. F. D. 2.  
 BOND, DR. R. G., Harrisburg.  
 BISHOP, C. E., Raleigh.  
 BOATRIGHT, A. O., Harrisburg,  
     R. F. D. 1.  
 BROTHERS, CHAS., Carrier Mills,  
     R. F. D.  
 BAKER, RAY, Harrisburg, R. F. D. 1.  
 BAKER, MANNIE, Harrisburg,  
     R. F. D. 1.  
 BARRINGER, A., Galatia.  
 BAKER, J. H. JR., Galatia.  
 BOND, GEO. JR., Galatia.  
 BRUCE, LEN, Norris City.  
 BROWN, ETNA, Carmi.  
 BROWN, GEORGE, Urbana, 806  
     W. Green St.  
 BEACH, EDDIE, Vienna.

## B

- BUSSING, E. H., Danville.  
 BELTON CANDY CO., Danville,  
 277 E. Mont St.  
 BONEFELD, HARRY, Danville,  
 122 N. Logan Ave.  
 BINGHAM, ALFRED, Alvin.  
 BROWN, C. C., Alvin.  
 BORDERS, O. P., Rossville.  
 BUSHNELL FEED CO., Danville,  
 East North St.  
 BOND, L. F., Rossville.  
 BOGARD, GEO. F., Flora.  
 BAY, GEO., Flora.  
 BUSLER, GEORGE, Decatur.  
 BOYETT, J. L., Eldorado.  
 BUTTERWORTH, ALFRED,  
 Rudement.  
 BYRUM, ORLANDO, Harrisburg.  
 BARNES, H. P., Harrisburg, 212  
 W. Church St.  
 BURNS, MARY A., Oliver.  
 BEATTY, O. H., Paris, R. F. D. 4.  
 BOYER ICE CREAM CO., Paris,  
 W. Court St. 242.  
 BISHOP & MORRIS, Paris, So.  
 Central.  
 BIGHAM, Gilbert, Pinckneyville.  
 BROWN MOTOR COMPANY,  
 Pinckneyville.
- BROWN, J. E., Ridgefarm,  
 R. F. D. 2.  
 BLAMFORD, O. E., Paris, 410 W.  
 Crawford.  
 BUSSART, CHAS., Paris, R. F. D.  
 5.  
 BLAIR, JOHN, Paris, 316 W.  
 Madison St.  
 BUSSING, E. H., Danville, 3 W.  
 Harrison St.  
 A. H. BARBER GOODHUE CO.,  
 Chicago, 300 W. Austin Ave.  
 BROWN, EARL, Sidell.  
 BROOKS, HARVEY, Georgetown.  
 BAILEY, C. B., Indianola.  
 BALDWIN, S. F., Indianola, R. F. D.  
 1.  
 BALKANEY, C. W., Georgetown,  
 R. F. D. 1.  
 BROOKSHIER, M. L., George-  
 town, 216 N. State St.  
 BLACK, WARD M., Georgetown.  
 BURCH, I. C., Georgetown, 419  
 Garfield Ave.  
 BROWN, GEO. B., Urbana, 806  
 W. Green St.  
 BOMFIELD, HARRY, Danville,  
 122 Logan Ave.  
 BRIDGFORD, LYLE, Joy.  
 BERGSTROM, AUG., Galesburg.

## C

- CREST, ED, SR., Equality.  
 CLARK, CHARLES, Harrisburg,  
 1102 S. McKinley St.  
 CLARY, CHARLES, Harrisburg,  
 303 W. Maple.  
 CHURCH, MRS. NORA, Equality,  
 R. F. D. 2.  
 CHURCH, R. F., Equality, R. F. D.  
 2.  
 CHRISMAN, H. L., Harrisburg,  
 R. F. D. 3.  
 CUMMINS, J. D., Harrisburg.  
 CHURCH, OSCAR, Harrisburg,  
 R. F. D. 3.  
 CUMMINS & MATTINGLY, Har-  
 risburg, R. F. D. 3.
- CABEL, OSCAR, Raleigh.  
 CAIN, PERRY, Harrisburg.  
 CAVENDER, D. E., Harrisburg.  
 CORNICK, I. J., Harrisburg, 124  
 N. Mill St.  
 CLARK, CHAS. E., Harrisburg,  
 R. F. D. 1.  
 CAPEL, DR. J. W., Harrisburg.  
 CLARK, R. B., Harrisburg.  
 CUMMINS, O. O., Harrisburg.  
 CLARK, LEON, Clay City.  
 CROSS, ROY, Clay City.  
 CLARK, STANLEY, Birmingham,  
 Sask. Canada.  
 CLARK, A. R., Harrisburg.  
 CROSSON, S. I., Carrier Mills.

## C

- COWGUER, JOHN W., Stonefort.  
 CARPENTER, DAN, Harrisburg,  
 R. F. D. 5.  
 CARERON, RAY, Eldorado.  
 CANNON, BRATCHER, Harris-  
 burg, 712 S. McKinley.  
 COZART, IRA, Harrisburg, Box  
 306.  
 CUMMINS, J. H., Harrisburg, 121  
 S. Mills St.  
 COTTON, STEPHEN, Harrisburg,  
 R. F. D. 1.  
 CLARK, HAWKINS, WHSE, C.,  
 Harrisburg.  
 CLAYTON, GROVER, Harrisburg.  
 COTTOR, W. O., Thompsonville.  
 CABLE, T. S., Raleigh.  
 CLARK, F. A., Mt. Sterling.  
 CLORE, HARVEY, Harrisburg,  
 R. F. D. 1.  
 COZART, OSCAR, Ledford.  
 CANTRELL, W. A., Raleigh.  
 CARR, W. HESTLER, Harrisburg,  
 R. F. D. 4.  
 COGDILL, GEORGE, Karbers  
 Bldg.  
 CAIN, T. J., Harrisburg, R. F. D.  
 2.  
 CROWDER, ARTHUR, Carrier  
 Mills.  
 CAIN, M. P., Carrier Mills, R. F. D.  
 3.  
 CUMMINS, ROBERT, Harrisburg,  
 R. F. D. 4.  
 CARDWELL, J. S., West End.  
 COLLINS, J. PHIL, Eldorado.  
 COOK, JAMES C., Harrisburg,  
 27½ W. Poplar St.  
 CAIN, EARL, Raleigh.  
 CABLE, LYNN, Harrisburg,  
 R. F. D. 1.  
 COOK, ARTHUR, Harrisburg.  
 CAVENDER, ROBERT, Harris-  
 burg.  
 CAVENDER, HERBERT, Harris-  
 burg.  
 CUMMINS, E. W., Harrisburg, E.  
 Poplar St.
- COOK, THOS., Harrisburg,  
 R. F. D. 1.  
 CLARK, V. E., Harrisburg,  
 R. F. D. 1.  
 CRANK, JOHN, Harrisburg,  
 R. F. D. 3.  
 COTTER, OSCAR, Galatin.  
 COLEMAN, ED, Harrisburg.  
 CLARK, HOWARD, Harrisburg,  
 R. F. D. 3.  
 CAPEL, KENNETH, Harrisburg.  
 COULEHAN, ED., Harrisburg, 311  
 E. Poplar St.  
 COFFEE, L. E., Harrisburg.  
 CLARK, CURTIS, McLeansboro.  
 COLBERT, ALVIN, Eagle.  
 CHAMNESS, GEO., Creal Springs.  
 COOK, ANDREW, Eldorado.  
 CARTER, W. J., Ipava.  
 CUMMINS, CASPER, Harrisburg,  
 R. F. D. 3.  
 CHILDERS, H., Harrisburg,  
 R. F. D. 1.  
 CLARIDA, JOHN, Harrisburg,  
 R. F. D. 1.  
 CLYMORE, DAN, Vienna.  
 CLYMORE, HARRIS, Vienna.  
 CARLTON, THOS., Vienna.  
 CARTER, WILL, Vienna.  
 CARTER, MERRITT, Vienna.  
 COWAN, THOS. J., Vienna.  
 CRANE, G. C., Pence, Indiana,  
 R. F. D. 1.  
 CAMPBELL, L. R., Bismark,  
 R. F. D. 1.  
 CONSOLIDATED PROD. CO.,  
 Chicago, 4750 Sheridan Rd.  
 CRAGS, GEO., Rossville.  
 CARTER, HOMER, Alvin.  
 COLBURG, WM., Alvin.  
 CRANE, WALTER S., Rossville.  
 CORNELL, THOS., Rossville.  
 CREIGHTON, LEWIS, Alvin.  
 CHAMBLISS, H. C., Flora, Box  
 667.  
 COX, RILEY, Paris, R. F. D. 3.  
 CASSITY, J. R., Paris, R. F. D. 3.  
 CLINE, FRED, Paris, R. F. D. 4.  
 CASSITY, J. R., Paris, R. F. D. 3.

## C

- CLAPP, C. C., Dudley, R. F. D. 12.  
 CLAPP, MRS. BLANCH, Dudley,  
 R. F. D. 12.  
 CRAIG, E. W., Paris, A & P Store.  
 COX, M. B., Dudley, R. F. D. 12.  
 CAMPBELL, JOHN A., Mt. Sterling, R. F. D. 6.  
 CONLEY, E., Bushton.  
 CONLEY, J. E., Bushton.  
 CONLEY, R. E., Charleston.  
 CRAIG, ORLAN, Rardin.  
 CRAIG, A. L., Rardin.  
 CRAIG, FOY, Bushton.  
 CONLEY, CLARENCE, Fair  
 Grange.  
 CRAIG, T. C., Charleston.  
 CONYNGTON, JOHN, Pinckneyville.
- CARLSON, EDW., Pinckneyville.  
 CHANDLER, E. W., Chicago, 61  
 W. Kinzie St.  
 THE CHURCH CREAMERY, Peoria.  
 CONRON HDWE. COMPANY,  
 Danville, 116 E. Main St.  
 CARTER, ALBERT, Jamaica.  
 CHAPMAN, ROBERT, Georgetown, R. F. D. 2.  
 CAMPBELL, MARY, J., Ridgefarm, R. F. D. 2.  
 CALDWELL, R. E., c. o. Cramer-Krasselt Co., Milwaukee, Mich. & Milwaukee Sts.  
 COGGESHALL, L. B., Indianola.  
 COURTEA, D. K., Knoxville.  
 CRISSY, N. O., Galesburg.

## D

- DURFEE, FRANK, Harrisburg, R. F. D. 4.  
 DAVIS, ALBERT, Harrisburg, R. F. D. 4.  
 DAVIS, J. W., Harrisburg, 115 W. South St.  
 DAVIS, W. W., Harrisburg, R. F. D. 4.  
 DAVIS, T. O., Harrisburg, R. F. D. 4.  
 DIXON, MARY, Harrisburg, R. F. D. 3.  
 DUNN, OLIVER, Harrisburg, R. F. D. 3.  
 DAVIS, B. F., Eldorado, R. F. D. 1.  
 DAVIS, R. A., Harrisburg, R. F. D. 4.  
 DUVAL, JOS., Stonefort.  
 DAVIS, ARTHUR, Broughton.  
 DAVIS, CHAMP, Harrisburg, 115 W. South St.  
 DALLAS, VERDA, Carrier Mills.  
 DAVIS, J. W. F., Harrisburg, S. Vine St.  
 DALLAS, J. H., Carrier Mills, R. F. D.  
 DARNELL, LON, Harrisburg, R. F. D. 1.
- DILLARD, WILL, Harrisburg, R. F. D. 4.  
 DAVIS, C. A., Harrisburg, R. F. D. 4.  
 DAVIS, EMMA, Harrisburg, R. F. D. 4.  
 DUNN, JOHN, Vienna.  
 DICK, A. T., Vienna.  
 DARROW, JAMES, Vienna.  
 DORRIS BROTHERS, Harrisburg.  
 DURFEE, LEWIS, Harrisburg, R. F. D. 4.  
 DENEAL, S. J., Harrisburg, R. F. D. 3.  
 DENEAL, A. P., Harrisburg, R. F. D. 3.  
 DENEAL, H. L., Harrisburg, R. F. D. 3.  
 DEVILLEZ, VERN, Harrisburg, R. F. D. 5.  
 DUN, WILL, Eldorado, R. F. D. 1.  
 DALLAS, ELMER, Harrisburg, R. F. D. 1.  
 DUNN, BERT, Harrisburg.  
 DIXON, ROY C., Harrisburg.  
 DUFF, WALLACE, Clay City.

## D

- DEVILLEZ, W. A., Harrisburg,  
R. F. D. 5.  
DAVIS, BEN H., Eldorado.  
DEVILLEZ, HARRY, Harrisburg,  
R. F. D. 5.  
DIEFENBACH, LOUIS, Stone-  
fort.  
DAVIS, JOHN H., Harrisburg.  
DURHAM, RAY, Harrisburg.  
DONOHOO, W. A., Equality.  
DAUGHERTY, W. H., Galatia,  
R. F. D. 1.  
DAVIS, WARD O., Eldorado.  
DROIT, ALFRED, Galatia,  
R. F. D. 1.  
DE JARNETT, BERT, Galatia,  
R. F. D. 1.  
DUNN, LOGAN, Stonefort.  
DALTON, ROY, Harrisburg,  
R. F. D. 1.  
DORRIS, HUGH, Harrisburg.  
DURHAM, W. A., Galatia.  
DORRIS, W. A., Harrisburg,  
R. F. D. 3.  
DUTOIR, R. J., Pana.  
DANVILLE WHSE. GROC. CO.,  
Danville.  
DANVILLE MORNING PRESS,  
Danville.  
DUNDAN, FRED, Potomac.
- DORNFELD, FRANK, Hoopston.  
DONOVAN, DR., Roseville.  
DAVIDSON, JOHN, Roseville.  
DOW, ROSCOE, Flora, R. F. D.  
DOW, LOREN, Louisville.  
DANIELS, C. M., Paris, 304 N.  
Main St.  
DOROTHY, JAY, Dudley, R. F. D.  
12.  
DONALDSON, BERT, Ramsy.  
DOYLE, LARRY S., Paris.  
DAVIDSON, RAY, Paris, R. F. D.  
5.  
DEVER, J. E., Rardin.  
DOERR, EARL, Pinckneyville.  
DUDENBOSTLE, HUGE, Pinck-  
neyville.  
THE DUQUOIN CRY & BOTTL-  
ING CO., Dequoin.  
DRAKE, WM. H., Perysville, Ind.  
DAVISON, MR. GEO. N., Sidell,  
R. F. D. 1.  
DICKSON, THELMA, Sidell.  
DUKES, C. E., Georgetown.  
DUKES, R. F., Georgetown.  
THE DAIRY FARMER, Des  
Moines, Iowa.  
DENNIS, W. A., Paris.  
DOINNE, M. J., Beaverville.

## E

- ESTES, JAMES, Harrisburg,  
R. F. D. 3.  
ENDICOTT, T. O., Harrisburg.  
ELDER, N. F., Eldorado.  
ESTES, EARL J., Harrisburg,  
R. F. D. 3.  
ENDSLEY, JAMES, Harrisburg.  
EWELL, J. E., Rudement.  
EDWARDS, TOM, Harrisburg,  
R. F. D. 3.  
ELDORADO HOME TELE. CO.,  
Eldorado.  
ERWOOD, JOHN, Eldorado.  
EGYPTIAN MAY TAG, Harris-  
burg.
- ETIENNE, CLARENCE, Eldora-  
do, R. F. D. 2.  
EDWARDS, J. M., Harrisburg,  
R. F. D. 4.  
EWELL, CRISSIE, Harrisburg,  
R. F. D. 3.  
ENGLEBY, BOB, Harrisburg.  
EVANS, JOHN, Harrisburg.  
ELLIOTT, T. O., Harrisburg, Box  
322.  
EMPSON, HERMAN, Harrisburg,  
R. F. D. 1.  
EWELL, S. S., Harrisburg,  
R. F. D. 3.  
EVANS, ED, Harrisburg.



## E

- EVERETT PANKEY, c. o. Pankey's Stand, S. Main St., Harrisburg.
- ERKMAN, JOHN, Harrisburg, R. F. D. 3.
- EVANS, MARIE, Harrisburg.
- EVANS, EVERETT, Harrisburg, R. F. D. 3.
- EVANS, W. H., Harrisburg, R. F. D. 3.
- ELDER, GLEN, Eldorado, R. F. D.
- EDWARDS, HORACE, Harrisburg, R. F. D. 1.
- ELKINS, JOE, Vienna.
- EVANS, SHERMAN, Vienna.
- ELDER, C. F., Harrisburg.
- ELLIOTT, R. E., Hoopeston.
- EVANS, G. E., Hoopeston.
- ELLIOTT BROTHERS, Hoopeston.
- ESWORTHY, FRED, Rossville.
- ELLEDGE, LOYD, Paris, R. F. D. 4.
- ELDREDGE, WILLIAM E., Oliver, R. F. D. 1.
- EASTER, L. H., Paris, Box 157.
- EDWARDS, W. O., Pinckneyville.
- ERWIN, DR. J. A., Pinckneyville.
- THE ELGIN BUTTER TUB CO., Elgin.
- EVANSVILLE PURE MILK CO., Evansville, Ind. (Glen Ogle)

## F

- FARRAR, FRED, Jacob, R. F. D. 1.
- FOSTER, JOHN, Harrisburg, R. F. D. 3.
- FOX, RILEY, Harrisburg, R. F. D. 4.
- FARWEE, JOHN H., Delwood.
- FRITS, WM., Harrisburg, R. F. D. 2.
- FRYER, GEORGE, Covington, Tenn.
- FRYER, WILLIE, Covington, Tenn.
- FRYER, ROY, Covington, Tenn.
- FIRWE, N. E., Harrisburg, R. F. D. 3.
- FIVASH, W. J., Galatia.
- FULLER, W. T., Vienna.
- FOSTER, MARGIE, Harrisburg.
- FOWLER, HENRY, Harrisburg.
- FLETCHER, J. W., Harrisburg, R. F. D. 1.
- FLEMMING, JAMES, Harrisburg, R. F. D. 1.
- FARMER, WILL, Vienna, R. F. D. 4.
- FARLEY, HARDIN, Vienna.
- FARRIS, HARTSELL, Vienna.
- FARRIS, LAWRENCE, Vienna.
- FARRIS, J. W., Vienna.
- FERRIS, WARD, Vienna.
- FERRELL, J. G., Equality.
- FOX, WALTER, Harrisburg.
- FARRELL, ORVAL, Harrisburg.
- FUGITT, GUY, Pontiac, Mich., 155 E. Pike St.
- FUGITT, ORAL, Harrisburg, R. F. D. 1.
- FLOTA, ERNIE, Harrisburg, 910 S. Granger St.
- FLOTA, C. T., Harrisburg.
- FREEDMAN, SAM, Harrisburg.
- FAVEREAU, ALEC, Harrisburg.
- FOWLER, JAMES, Harrisburg, R. F. D. 5.
- FLANDERS, RALPH, Harrisburg.
- FOX, LEWIS, Harrisburg, R. F. D. 4.
- FARMER, SAM, Harrisburg, R. F. D. 1.
- FINNEY, MR. H. N., Harrisburg.
- FERGUSON, C. A., Harrisburg.
- FIVASH, JESSE G., Galatia, R. F. D. 2.
- FOSTER, NEAL, Muddy.
- FOX, GEORGE, Eldorado.
- FOX, MARION, Eldorado.
- FARMER, IRA, Harrisburg, R. F. D. 1.

## F

- FOSTER, EMMETT, Harrisburg,  
c. o. S. Foster.
- FIFE, TOM, Carrier Mills.
- FAHLMAN, DUNCAN J., Detroit,  
Mich., Buhl Stamping Co.
- FARALL, FOREST O., Danville,  
1112 N. Gilbert St.
- FISHER & McKEE, Danville.
- FRAME, J. W., Danville, Sugar  
Creek Cry. Co.
- FRIED, CHAS., Danville, Sugar  
Creek Cry. Co.
- FILSON, GLEN C., Taylorville,  
Train Dispatcher.
- FINLEY BROTHERS, Danville.
- FLORA HIGH SCHOOL DAIRY  
CLUB, Flora.
- FIDLER, A. D., Paris, R. F. D. 7.
- FLICKNER, JAMES, Paris,  
R. F. D. 11.
- FRAZIER, JOHN T., Robinson.
- FRAZIER, BIRCHIE, Dudley,  
R. F. D. 12.
- FEITSAM, A. F., Marion, R. F. D.  
6.
- FRIZ, REV. A., Pinckneyville.
- FRASER, W. T., Champaign, c. o.  
University.
- FREEMAN, CHAS., Enfield.
- FAIRBANKS MORSE & COM-  
PANY, Chicago, 900 S. Wabash  
Ave.
- FISHER, DR. J. G., Danville, 1014  
N. Logan Ave.
- FITZSIMMONS, RAY, Ridgefarm.
- FINNEY, WALTER, Sidell,  
R. F. D. 1.
- FINNEY, DR. L., Georgetown.
- FRAME, J. W., Danville, 123 N.  
Washington Ave.
- FINLEY, G., Danville, R. F. D.
- FULLER, LUTHER, Ag. Agt. C. &  
E. I., Danville.

## G

- GARTER, L. C., Equality.
- GUARD, CHAS. L., Harrisburg.
- GATES, B. D., Harrisburg.
- GIBBLE, R. T., Harrisburg,  
R. F. D. 4.
- GATES, R. L., Harrisburg, R. F. D.  
3.
- GATES, A. J., Harrisburg, R. F. D.  
4.
- GIBBONS, PLEAS, Harrisburg,  
R. F. D. 5.
- GRAMLICH, BERT, Harrisburg.
- GRAY, F. S., Harrisburg, 601 N.  
Webster.
- GRIGSBY, WILL, Harrisburg.
- GRACE, CHARLES, Harrisburg.
- GRANT, W. A., Harrisburg.
- GATES, HERMAN, Eldorado.
- GRABLE, LAWRENCE, Eldorado.
- GRISHAM, W. D., Eldorado.
- GOLDEN, C. A., Harrisburg.
- GERABACHER, R., Harrisburg.
- GASKINS, CHARLES, Harris-  
burg, S. Vine St.
- GHENT, MRS. OLA, Harrisburg,  
500 N. Webster St.
- GREGG, T. Y., Harrisburg.
- GORE, ALBERT G., Galatia.
- GUNTER, WALTER, Eldorado,  
R. F. D. 1.
- GLASCOCK, RAY, Harrisburg,  
R. F. D. 5.
- GLASCOCK, GEO., Harrisburg,  
R. F. D. 5.
- GRIBBLE, JOHN, Rudement.
- GRIBBLE, ALBERT, Rudement.
- GIDCUMB, W. E., Mitchellsville.
- GRAY, WILL, Galatia.
- GIBBS, C. M., Harrisburg, R. F. D.  
3.
- GIBBS, JESS, Kerber's Ridge,  
R. F. D. 1, Box 24K.
- GARRETT, THOMAS, Vienna.
- GREGG, W. E., Omaha, R. F. D. 3.
- GODDARD, C. W., Omaha.
- GOLLIHER, J. W., Harrisburg,  
R. F. D. 1.
- GOLLIHER, T. P., Galatia.

- GOODMAN, ALBERT, Harrisburg, R. F. D. 3.  
 GORE, CARROLL, Harrisburg, R. F. D. 1.  
 GATES, HENRY, Harrisburg.  
 GARRETT, D. G., Norris City.  
 GIVENS, C. P., Carmi.  
 GAGE, WILL, Vienna.  
 GAGE, JOHN, Vienna.  
 GORDON, ALLEN T., Danville, Chamber of Commerce.  
 GUBBINS, JOS. X., Chicago, 1144 Conway Bldg.  
 GREEN, CHAS., Rossville.  
 GEZEL, F. A., Sterling, 807 ½ W. 4th St.  
 GOLDEN, S. R., Flora.  
 GRAHAM, RAY, Flora.  
 GIBSON, C. E., Flora, Flora Nat'l Bank.  
 GLICK, J. E., Chrisman.  
 GUMM, FRED, Paris, R. F. D. 7.  
 GUMM, CLARENCE, Paris.  
 GLECKLER, SAM F., Paris, R. F. D. 4.  
 GLECKLER, MRS. O. J., Mattoon, 1012 Wabash Ave.  
 GREIG, JAMES, Chicago, 10435 Ave. L.  
 GIVENS EAST FARM, Mt. Sterling.  
 GORNET, ARTHUR A., Marion, 408 W. Van Buren St.  
 GEUMALLEY, CHAS., Pinckneyville.  
 GRUNER, F. O., Pinckneyville.  
 GRUNER, GEO., Pinckneyville.  
 GINN, JAKE, Pinckneyville.  
 GEORGE, R. W., Springfield.  
 GUBBINS, JOS. X., Chicago, Patterson Parchment Co.  
 THE GRESSELLI CHEMICAL CO., Chicago, 2107 Canalport Ave.  
 J. H. GREENHALGH & CO., Chicago, 332 S. Michigan Ave.  
 GALLAGHER, MR. GLEN, Georgetown, R. F. D. 1.  
 GAHAN, J. W., Jamacia.  
 GAINES, FRED, Sidell, R. F. D. 1.  
 GREEN, ALBERT, Georgetown, R. F. D. 1.  
 GREEN, MELVIN, Georgetown, R. F. D. 2.  
 GUINN, SAM, Sugar Creek Cry. Co., Watseka.  
 GALESBURG NAT'L BANK, Galesburg.

## H

- HEISTER, ED, Harrisburg, 206 N. Jackson St.  
 HAYES, ELVIS, Broughton.  
 HAWKINS, EVERETT, Harrisburg, 125 N. Park Ave.  
 HEATHERLY, EZRA, Harrisburg, 119 S. Granger St.  
 HECK, A. V., Eldorado, R. F. D. 3.  
 HUTCHINSON, W. E., Galatia, R. F. D. 1 Box 83.  
 HULL, CLARENCE, Eagle.  
 HOLLAWAY, J. P., Harrisburg, N. Jackson St.  
 HAWKINS, RICHARD, Neelyville, Mo.  
 HAWKINS, HUBERT, Harrisburg, 609 S. Main St.  
 HERRMAN, N. A., Harrisburg, 17 W. Poplar St.  
 HAGLER, MILLARD, Harrisburg, S. Granger St.  
 HARRIS, FRANK, Harrisburg, R. F. D. 3.  
 HARRIS, GEORGE, Harrisburg, R. F. D.  
 HOGG, THOMAS, Harrisburg, R. F. D.  
 HULL, JOHN G., Harrisburg, R. F. D.  
 HICKS, J. F., Harrisburg, R. F. D.  
 HARRIS, EZRA, Galatia, R. F. D. 2.  
 HALE, BROTHER, Raleigh.  
 HARRELL, J. E., Norris City.  
 HEATHMAN, MRS. JULIA, Raleigh.

## H

- HOLMES, R. E., Harrisburg, 113 W. Elm St.  
 HUNTER, JOE, Rudement.  
 HARRISON, SHAD, Harrisburg.  
 HENSEN, GEO., Carrier Mills, R. F. D.  
 HOBBS, W. P., Harrisburg, R. F. D. 1.  
 HULETT, OPLE, Norris City.  
 HARRELL, JOHN, Norris City.  
 HULETT, CHARLES, Norris City.  
 HULETT, GEORGE, Norris City.  
 HADEN, R. F., Carmi.  
 HARRIS, NATHAN, Vienna.  
 HAND, JOHNY, Vienna.  
 HARDY, ROE, Vienna.  
 HAMILTON, JOSIAH, Dorrisville.  
 HUTTON, DR. B. B., Harrisburg.  
 HOLLIDAY, SAM, Xenia.  
 HOLIDAY, HOMER, Xenia.  
 HEATHERLY, J. D., Harrisburg, R. F. D. 2.  
 HALE, F. L., Raleigh.  
 HURLEY, J. B., Harrisburg, R. F. D. 4.  
 HORTON, CHARLEY, Harrisburg, R. F. D. 3.  
 HARRIS, C. M., Carrier Mills.  
 HARRIS, JASPER, Carrier Mills.  
 HURLEY, OSCAR, Harrisburg, R. F. D. 4.  
 HART, DR. F. M., Harrisburg.  
 HART, JOHN, Harrisburg.  
 HALL, MRS. ENACH, Harrisburg.  
 HOTEL HORNING, Harrisburg, R. F. D. 3.  
 HUFFMAN, G. F., Harrisburg.  
 HART, R. S., Mitchellsville.  
 HUDNALL, MILAS, Mitchellsville.  
 HILLARD, DAN, Harrisburg, R. F. D. 3.  
 HINE, H. L., Harrisburg, R. F. D. 3.  
 HETHERINGTON, THOS., Harrisburg.  
 HALE, LELAND S., Raleigh, R. F. D. 1.  
 HARRIS, HANEY, Carrier Mills.  
 HARRIS, ROBERT, Carrier Mills.  
 HART, DR. G. S., Harrisburg.  
 HAWKINS, WILLIE, Harrisburg.  
 HANSON, FRANK, Rossville.  
 HORNEMAN, H. C., Danville, 123 Washington Ave.  
 HARTER, GEO., Flora.  
 HART, W. E., Marion.  
 HICKLE, MARIE, Paris, Box 169.  
 HESLER, A. J., (County Agent) Covington, Ind.  
 HENDERSON, A. M., Galesburg, RR3 Box 74.  
 HURST, ROY, Harrisburg.  
 HICKMAN, HENRY, JR., Paris, R. F. D. 3.  
 HODGE, W. H., & J. H., Paris, E. Side Square.  
 HARTLEY, DICK, Paris, E. Wood St.  
 HICKMAN, WILBUR, Paris, Sholern Bldg.  
 HORN, A. A., Arcola.  
 ERNEST HIGGINS & SON, W. Salem.  
 HOLDEN, R. L., LaFayette, Ind., 500 N. Salisbury.  
 HOLMES HDWE. & SUPPLY CO., Danville, 26 N. Hazel St.  
 HOLCOMB, A. A.  
 J. J. HOLCOMB MFG. CO., Urbana, 1543 Van Buren St.  
 HEDGES, MRS. GEO., Fairmont, R. F. D. 3.  
 HOLTON, W. A., Sidell.  
 HUBBARD, ARTHUR, Grape Creek.  
 HART, ROY, Fairmont, R. F. D. 1.  
 HENDERSON, W. T., Danville, 302 Daniel Bldg.  
 HOSKINS, WM., Pence, R. F. D. 1.  
 HENRY, C. H., Georgetown, 121 S. State St.  
 HOUGHTON, H. J., Georgetown.  
 HORNEMAN, H. C., Danville, 123 N. Washington St.  
 HOFF, A. E., Chicago, 618 Washington Blvd.  
 HUBBARD, RALPH, Georgetown.  
 HENLEY, BEN, Harrisburg.



## H

- HOME ICE & FEED CO., Georgetown.  
 HIBERLY & MC MAHAN, Georgetown.  
 HANCOCK, WILLIAM, Stonefort.  
 HART, J. B., Harrisburg.  
 HAINER, FRANK, Harrisburg.  
 HAWKINS, JESS, Harrisburg, R. F. D. 1.  
 HATCHER, J. M., Harrisburg, R. F. D. 1.  
 HAYDEN, R. F., Bloomfield.  
 HALL, F. R., Vienna.  
 HAWKINS, FRED, Harrisburg, 614 S. Granger St.  
 HINE, C. M., Harrisburg, R. F. D. 4.  
 HOLLAND, BIRTUS, Harrisburg, R. F. D. 3.  
 HART, HARRY, Harrisburg, R. F. D. 1.  
 HILLIARD, CLARENCE, Harrisburg, 600 E. Locust St.  
 HARRIS, HARVEY, Carrier Mills.  
 HANCOCK-HINE DRY GOODS CO., Harrisburg.  
 HARPER, MRS. LEWIS, Harrisburg, R. F. D. 4.  
 HARRIS, J. J., Wyandotte, Mich.  
 HOFF, GEO. S., Danville.  
 HOLMES HDWE. & SUPPLY CO., Danville.  
 HOSHAUER, FRANK, Rossville.  
 HEWITT, W. L., Mattoon.  
 HESLAR, ALFRED J., Covington.  
 HAYWOOD, GEO. P., Haywood, Haywood Toy Co.  
 HOMENOR & COSSEY CO., Danville.  
 HULCE, HENRY, Danville, 301 E. Van Buren St.  
 HUSHARD, EDWARD, Rossville.  
 HANNAH, KENT, Alvin.  
 HIGHT, VIRGIL, Alvin.  
 HARDY, M. J., Alvin.  
 HUGHS, BURT, Hoopeston.

## I

- IRWIN, J. C., Mitchellsville.  
 IRWIN, E. E., Harrisburg, 309 S. Granger St.  
 IRWIN, SHERMAN L., Harrisburg.  
 INGRAM, OLEN, Harrisburg, R. F. D. 3.  
 ISAACS, W. R., Harrisburg, R. F. D. 3.  
 THE IDEAL DAIRY, Evansville, Ind., 7th & Penn Ave.

## J

- JACKSON, LONARD, Harrisburg.  
 JOHNSON, WILLIAM, Harrisburg, Saline Hotel.  
 JOYNER, RAY, Stonefort, R. F. D.  
 JOYNER, ERNEST, Stonefort.  
 JONES, LEWIS, Harrisburg, R. F. D. 5.  
 JOHNSON, GEORGE, Harrisburg, R. F. D. 3.  
 JONES, CHAS., Harrisburg, R. F. D. 4.  
 JEFFRIES, L. E., Vienna.  
 JOHNSON, JAMES, Harrisburg, R. F. D. 3.  
 JOHNSON, W. R., Harrisburg, 807 E. Logan St.  
 JAMES, BEN, Harrisburg.  
 JOHNSON, WES, Harrisburg, R. F. D. 1.  
 JAMES, C. H., Harrisburg, R. F. D. 5.  
 JONIER, W. B., Eldorado, R. F. D. 1.  
 JOHNSON, C. R., Harrisburg, R. F. D. 3.  
 JACKSON, JOHN R., Harrisburg.  
 JOHNSON, J. B., Harrisburg, R. F. D. 4.



## J

- JONES, REDFORD, Carrier Mills.  
JONES, WALDO, Eldorado.  
JAMES, S. E., Chicago, 166 W.  
Jackson Blvd.  
JONES, O. RICE, Paris.  
JONES, C. E., Chicago, 600 Mon-  
roe Bldg.  
JOHNSON, W. M., Rardin.  
JACKSON, JAMES, Hindsboro.  
JAMES, FOY, Bushton.
- JOEHRING, V. E., Cario, Gen'l  
Agt. Big 4.  
JONES, A. N., Chicago.  
JAMES, S. E., Chicago, 166 W.  
Jackson Blvd.  
JOSEPH, J. H., Sidell.  
JONES, DR. G. B., Sidell.  
JORDAN, S. O., Georgetown, R. 1.  
JERMAN, J. N., Georgetown.

## K

- KEELIN, W. E., West End.  
KLINE, CURREN, Creal Springs.  
KNIGHT, JOHN, Harrisburg,  
R. F. D. 1.  
KAID, B. J., Harrisburg, R. F. D. 4.  
KIELHORN, CHAS. R., Harris-  
burg.  
KENEIPP, HARVEY, Mitchell-  
ville.  
KENEIPP, JOHN, Mitchellville.  
KNIGHT, FRANK, Galatia.  
KING, OMER, Centralia.  
KENTNER, L. O., Bismark.  
KERCHER, OTIS, Danville, Farm  
Bureau Ver. Co.  
KRUKEWITT, W. F., Alvin.  
KEMARD, J. T., Evansville, Ind.,  
Sugar Creek Cry. Co.  
KOELLING, C. F., Belleville, 218  
Maswotah.
- KOKEN, R. B., St. Louis, Mo.,  
7900 Mich. Ave.  
KING, BIRT, Dudley.  
KANE, E. K., Pinckneyville.  
KELLERMAN, EUGENE, Pinck-  
neyville.  
KOELLING, C. F., Bellville, 230  
S. Peoria St.  
KERROHER, H. C., Cyprus.  
KENNARD, J. L., Evansville, Ind.  
Sugar Creek Creamery Co., Indi-  
ana Ave. & Fulton St.  
KINLEBERGER, J. J., Kalamazoo,  
Mich. Kalamazoo Parchment Co.  
KERCHER, OTIS, Danville, Cham-  
ber of Commerce Bldg.  
KELLEY, O. M., Sidell.  
KEETEN, WM. H., Georgetown.  
KLOOSE, A. P., Peoria, 105  
Arthur Ave.

## L

- LAMBERT, JAMES, Harrisburg.  
LAMKIN, H. J., Harrisburg,  
R. F. D. 4.  
LEVELETTE, E. B., Harrisburg,  
R. F. D. 4.  
LIMERICK, GEORGE, Harris-  
burg.  
LEWIS, ROBERT I., Stonefort.  
LAUNIUS, WILLIAM, Stonefort.  
LEWIS, A. C., Benton.  
LANE, ROY, Harrisburg.  
LEWIS, SAM, Sumner, R. F. D. 3.
- LANE, ROBERT, Harrisburg,  
R. F. D. 3.  
LEDFORD, MD., Harrisburg,  
R. F. D. 3.  
LEITCH, WILLIAM, Raleigh.  
LEITCH, WILBER H., Harrisburg.  
LIEBERMAN, F., Harrisburg.  
LEWIS, J. B., Harrisburg.  
LE MONDE, NILES, Harrisburg,  
212 W. Baker St.  
LEWIS, JOHN, Stonefort.  
LEEK, ED, Muddy

## L

- LAMBTON, ROY, Harrisburg.  
 LEWIS, RALPH M., Stonefort.  
 LUCAS, O. L., Harrisburg.  
 LEHMAN, D. A., Harrisburg, 205 N. Granger St.  
 LEITCH, Z. T. S., Harrisburg.  
 LAND, GEO., Harrisburg, R. F. D. 2.  
 LANDS, ARTHUR, Harrisburg, R. F. D. 3.  
 LEDBETTER, D. L., Harrisburg, R. F. D. 3.  
 LAMBTON, W. M., Harrisburg, R. F. D. 1.  
 LARRISON, HENRY, Vienna.  
 LINDSAY, JOHN, Vienna.  
 LOUGH, ROBERT, Vienna.  
 LEDFORD, J. W., Harrisburg, 315 E. Locust St.  
 LEONARD, STANLEY, Rossville, R. F. D.  
 LEWIS, DAN JR., Danville, 1223 Grant St.  
 LONG, MARION, Vienna.  
 LOVE, E. S., Danville, Sugar Creek Cry.  
 LENEVE, SAMUEL, Rossville.  
 LAMB, C. H., Paris, Sugar Creek Cry.  
 LEHMAN, R. G., Paris, 224 E. Wood St.  
 LEENHOUTH, E. J., Chicago, 630 LaSalle St. Station.  
 LIPPINCOTT, C. A., Rardin.  
 LALLY, WM. A., Chicago, 166 Jackson Blvd.  
 LAMB, CHAS., Paris.  
 LOVE, C. S., Danville, Sugar Creek Cry. Co.  
 LAMBERT, E. S., Georgetown, R. F. D. 1.  
 LEWIS, DAN, Danville, 1113 Sheridan St.  
 LENHART, GEORGE, Georgetown, R. F. D. 1.  
 LARSEN, CARL, Galesburg.

## M

- MULLINIX, CECIL, Ledford.  
 MITCHELL, A. M., Harrisburg.  
 MICK, C. W., Harrisburg, R. F. D. 1.  
 MITCHELL, H. E., Harrisburg.  
 MC DANIEL, MURRAY O., Harrisburg.  
 MOORE, SILAS, Harrisburg, R. F. D. 4.  
 MOORE, ROBERT, Harrisburg, R. F. D. 5.  
 MITCHELL, GEORGE, Harrisburg.  
 MC ILRATH, ARTHUR, Harrisburg.  
 MILLER, W. C., Harrisburg.  
 MOORE, BERT, Harrisburg, R. F. D. 1.  
 MOORE, JESSE, Harrisburg, R. F. D. 1.  
 MOORE, A. A., Harrisburg.  
 MARTIN, ORM, Carrier Mills.  
 MYERS, JACOB W., Harrisburg.  
 MC KEE, DR. C. L., Harrisburg, 22 S. Main St.  
 METCALF, J. R., Harrisburg.  
 MYERS, MRS. MARY R., Harrisburg, R. F. D. 3.  
 MC VEY, MRS. FRANK, Newton.  
 MITCHELL, STEVE, Mitchellsville.  
 MITCHELL, WILSON, Harrisburg.  
 MC ILRATH, HUGH, Harrisburg, R. F. D. 1.  
 MILLIGAN, ARTHUR, Harrisburg.  
 MUGGE, J. S., Harrisburg, R. F. D. 3.  
 MOORE, WM., Carrier Mills, R. F. D. 1.  
 MC DERMOTT, JOHN, Harrisburg, R. F. D. 2.  
 MILLER, A. R., Carrier Mills, R. F. D. 1.

## M

- MC SPARIN, EWING, Mitchellsville.
- MAHAFFEY, HENRY, Eldorado, R. F. D. 3.
- MOSBY, CLYDE, Eldorado, R. F. D. 1.
- MOORE, W. A., Eldorado.
- MITCHELL, E. F., Equality.
- MAYBERRY, I. C., Harrisburg, R. F. D. 4.
- MORELAND, MORE, Carrier Mills, R. F. D. 2.
- MOTSINGER, ZEB, Carrier Mills, R. F. D. 1.
- MC CONNELLY, ED, Harrisburg, R. F. D. 5.
- MOORE, GEO., Harrisburg, R. F. D. 4.
- MC DONALD, TOM, Mitchellsville.
- MATTINGLY, JOHN, Harrisburg, R. F. D. 3.
- MC GUIRE, HENRY, Harrisburg, R. F. D. 4.
- MITCHELL, J. D., Raleigh.
- MC INTYRE, H., Harrisburg.
- MEECHAM, H. A., Golconda.
- MORRIS, JOHN A., Harrisburg, R. F. D. 4.
- MAC KENROTH, GEORGE, Harrisburg.
- MC CORMICK, R. E., Ft. Branch, Ind.
- MC SPARIN, W. S., Delwood.
- MC LAIN, H. C., Merion, Colo.
- MALADY, CHARLES, Harrisburg.
- MC INTOSH, ANDREW, Harrisburg.
- MC CASKILL, W. H., Timewell.
- MC GLASHAN, ROY, Xenia.
- MUGGE, A. F., Harrisburg, R. F. D. 4.
- MILEY, HARKER, Harrisburg, 114 W. Church St.
- MILEY, GEO. M., Harrisburg, 115 W. Church St.
- MC CONNELL, W. N., Harrisburg, R. F. D. 5.
- MUGGE, CLARENCE, Harrisburg, R. F. D. 4.
- MATTINGLY, BERTIS, Harrisburg, 217 S. Ledferd St.
- MC DERMOTT, LOUIS, Harrisburg, R. F. D. 3.
- MALONEY, G. W., Harrisburg, R. F. D. 4.
- MILLER, ED, Harrisburg, R. F. D. 3.
- MEACHAM, WILLIAM, Harrisburg, R. F. D. 3.
- MALONE, ALBERT, Galatia.
- MILLER, OSCAR, Harrisburg, R. F. D. 3.
- MC NEAL, JOHN, Harrisburg, R. F. D. 3.
- MOORE, AUSTIN, Harrisburg-Saline 4.
- MILLER, DALLAS, Harrisburg.
- MITCHELL, ARTHUR, Harrisburg, R. F. D. 5.
- MASSEY, J. H., Eldorado.
- MUGGE, WILL, Golconda, R. F. D. 1.
- MONROE, WM., Junction.
- MURPHY, J. W., Harrisburg, R. F. D. 2.
- MORRILL, EZRA, Carrier Mills.
- MITCHELL, C. A., Harrisburg, R. F. D. 3.
- MIFFLIN, FRANK, Harrisburg, R. F. D. 1.
- MC GUIRE, HARVE, Harrisburg, R. F. D. 4.
- MATHIS, BILL, Vienna.
- MATHIS, DOLPH, Vienna.
- MATHIS, RICHARD, Vienna.
- MORGAN, P. F., Vienna.
- MORGAN, DICK, Vienna.
- MORSE, RAY, Vienna.
- MATHIS, D. W., Vienna.
- MATHIS, WILEY, Vienna.
- MEANUM MFG. CO., Minneapolis, Minn., 2600 27th Ave. S.
- MC CORMICK, JAMES, Alvin.
- MC CORMICK, J. H., Danville, c. o. Com'l Trust & Savings Bank.
- MEEKS, JAMES A., Danville.

## M

- MATTHEWS, STANLEY, Ross-ville, R. F. D. 1.  
 MILLER, H. L., Danville, 115 W. Wash. Ave.  
 MONRAD, K. J., Little Falls, N. Y., Chr. Hansen Laboratory.  
 MATTHEWS, QUAY, Bismark.  
 MILLER, S. J., Rossville, R. F. D.  
 MATTHEWS, CHAS. W., Ross-ville, R. F. D. 2.  
 MATTHEWS, MASTER HOW-  
 MATTHEWS, J. L., Rossville.  
 MATTHEWS, EVA F., Rossville, R. F. D. 2.  
 MATTHEWS, J. A., Bismark.  
 MEYER, HARRY, Rossville.  
 MC FERREN, WM., Hoopeston.  
 MATTHEWS, ELWOOD, Ross-ville.  
 MATTHEWS, MASTER HOW-  
 ARD, Rossville, R. F. D. 2, c. o. C. W. Matthews.  
 MILLARD, F. H., Chicago, 225 N. Michigan Ave.  
 MAGUIRE, W. R., Chicago, 140 S. Dearborn.  
 MORGAN, CLARENCE, Rossville.  
 MC DONALD, CHAS., Whiting, Ind., 401 Cleveland Ave.  
 MURPHY, WALFORD, Whiting, R. F. D. 5.  
 MILLER, W. O., Georgetown, R. F. D. 1.  
 MARRS, ASA T., Paris, R. F. D. 4.  
 MC DWITT, JOS, Paris, R. F. D. 6.  
 MARSSEHNAN, DR. T. J., Paris, N. Central Ave.  
 MILLER, CHAS. E., Paris, R. F. D. 4.  
 MC INTOSH, DAVE, Paris, R. F. D. 4.  
 MASON, WALTER, Paris, 406 La-Salle St.  
 MOORE, H., Harrisburg, 427 W. College St.  
 MC ALLISTER, W. A., Arcola.  
 MC MORRIS, ARTHUR, Charles-ton.  
 MASON, J. F., Rardin.  
 MATZENBACHER, CHAS., Pinck-neyville.  
 MC ELVAIN, E. J., Pinckneyville.  
 MENTAL, ADAM, Pinckneyville.  
 MURPHY- WALL STATE BANK  
 & TRUST CO., Pinckneyville.  
 MALAN, E. C., Pinckneyville.  
 MUCKLERoy, R. E., Carbondale, c. o. University.  
 MAKEPEASE, I. G., Springfield.  
 MINOR, COL. C. C., Woodstock.  
 MACK, ELMER, Menasha, Wis., Manasha Printing & Carton Co.  
 MILLER, C. F., Cedar Rapids, Ia., Machinery Sales Dept. J. G. Cherry Company.  
 MATTHEWS, J. L., Rossville, R. F. D.  
 MATTHEWS, CHAS., Rossville, R. F. D.  
 MC GRATH, A. E., St. Louis, Mo., 3301 Park Ave.  
 MAANUM MFGR. C., Minneapolis, Minn., 2600 27th Ave. S.  
 MAGUIRE, W. R., Chicago, 1118 Marquett Bldg.  
 THE MORNING PRESS, Danville.  
 MEYERS, T., Sidell.  
 MC CALLISTER, CLAUD, Indian-ola.  
 MOORELAND, O. E., Indianola.  
 MILLER, O. W., Indianola.  
 MORMON, VERNON, Georgetown, R. F. D. 1.  
 MIETHE MOTOR CO., George-town.  
 MAHLE, G. C., Danville, 1118 Sheridan Blvd.  
 MOSIER, LEWIS, Indianola, R. F. D. 1.  
 MOFFITT, J. J., Olivet.  
 MELIN, BERT, Galesburg, R. F. D. 2.

## N

- NYBERG, DR. R. B., Harrisburg.  
 NAMEETH, JOHN, Eldorado.  
 NORMAND, HOWARD, Karbers Ridge.  
 NOLAN, WILLIAM D., Carrier Mills.  
 NELSON, ORVAL, Harrisburg.  
 NAUGLE, ROY, Harrisburg, R. F. D. 5.  
 NORMAN, ROGER, Harrisburg, R. F. D. 3.  
 NORMAN, CLAYBURN, Harrisburg, R. F. D. 3.  
 NOLAN, G. H., Carrier Mills, R. F. D. 1.  
 NELSON, LEO, Harrisburg, R. F. D. 2.  
 NORRIS, J. L., Norris City.  
 NORRIS, W. R., Norris City.  
 NELSON, RALPH, Carmi.  
 NEWTON, HENRY, Vienna.  
 NELSON, ELVIS, Carmi.  
 NELSON, C. P., Danville, First Nat'l Bank.  
 NOBES, C. T., Pana.  
 LOUIS F. NAFIS, INC., Chicago, 23 N. Desplaines.  
 NAT'L. CARTON CO., Joliet, A. W. Madsen.  
 NADIN, GEORGE, Paris, West Court St.  
 NEWHEART, J. V., Paris, R. F. D. 4.  
 NICKELL, C. D., Charleston.  
 NIESING, J. C., Pinckneyville.  
 NELSON, CHARLES P., Danville, First Nat'l. Bank.  
 NATIONAL CARTON CO., Joliet.  
 NOBIS, C. A., Barry.  
 NAFIS, LOUIS F., Chicago, 23 N. Desplaines.  
 NEUBERT, WILBUR, Ridgefarm, R. F. D. 2.  
 NESBITT, HERBERT, Indianola.  
 NIPPER, J. R., c. o. Sugar Creek Cry. Co., Watseka.  
 NICHOLS, J. H., Paris.  
 NATIONAL CARTON CO., Joliet.

## O

- O'KEEFE, ARTHUR, Stonefort.  
 OLIVER, FRANK, Harrisburg.  
 OZMENT, E. L., Harrisburg.  
 OLIVER, J. H., Harrisburg, R. F. D. 4.  
 OLIVER, C. F., Eldorado, R. F. D. 1.  
 OWENS, JAMES, Harrisburg, R. F. D. 3.  
 OLIVER, MARGARET, Harrisburg, R. F. D. 4.  
 OWENS, W. H., Galatia, R. F. D. 2.  
 OLIVER, JOS., Harrisburg, 119 W. O'Gara St.  
 ODUM, JAMES, Harrisburg, R. F. D. 2.  
 OFARRAL, HENRY, Alvin.  
 OWEN, THOMAS, H., Melrose Park, Solar Sturgis Mfg. Co.  
 O'HAIR, CARLISLE, Redmon.  
 O'HAIR, MRS. W. S., Paris, R. F. D. 4.  
 O'HAIR, J. B., Paris, 27 E. Court St.  
 O'HAIR, E. P. & E. L., Bushton.  
 O'DONNELL, GEORGE, Olney.  
 OGLE, GLEN, Evansville, Evansville Pure Milk Co.  
 OWEN, MR. C. A., Georgetown, R. F. D. 1.



## P

- PORTER, LEE, Eldorado, R. F. D. 2.  
 PULLMAN, W. B., Raleigh.  
 PRATT, GEO. T., Raleigh.  
 PULLIAN, C. B., Galatia.  
 PATTERSON, FRED J., Harrisburg.  
 PARKS, F. L., Harrisburg.  
 PRATHER, J. W., Eagle.  
 PARKS, HOSEA, Rudemont.  
 PATTERSON, GAY, Harrisburg, c. o. Patterson Bros.  
 PEARCE, DR. F. B., Eldorado.  
 PROUT, LUTHER, Harrisburg, R. F. D. 2.  
 PICKFORD, JOHN, Harrisburg.  
 PICKERING, JAMES, Ledford.  
 PARISH FURNITURE CO., Harrisburg.  
 POWEL, MRS. HENRY, Harrisburg, R. F. D. 3.  
 PURDOM, JOHN, Harrisburg, R. F. D. 2.  
 PYLE, GLEASON, Harrisburg, R. F. D. 4.  
 PYLE, JOHN W., Carrier Mills, R. F. D. 4.  
 PEARCE, GUY, Equality.  
 PRATHER, JAMES W., Mitchellsville.  
 PANKEY, JOHN R., Mitchellsville.  
 PARKER, L. L., Harrisburg, E. Church St.  
 PORTER, MRS. ELLA, Eldorado.  
 PICKERING, CHARLES, Harrisburg, R. F. D. 2.  
 PARKER, BOB, Harrisburg, R. F. D. 2.  
 PRIEST, HOWARD, Harrisburg, R. F. D. 2.  
 PARTAIN, HENRY, Equality, R. F. D.  
 PEARCE, THOMAS, Eddyville, R. F. D.  
 PERKINS, JOHN, Harrisburg, R. F. D. 3.  
 PARTAIN, WILLIE, Harrisburg, R. F. D. 3.  
 PANKEY'S BROS. BAKERY, Harrisburg, Box 368.  
 PANKEY, EVERETT, Harrisburg, South Main St. c. o. Pankey's Stand.  
 PARKS, G. B., Harrisburg, R. F. D. 2.  
 PANKEY, W. H., Harrisburg, R. F. D. 1.  
 POTTS, LOY, Harrisburg, R. F. D. 2.  
 PALMA, MRS. B. D., Eutaw, Ala.  
 PICKENS, WALTER, Vienna.  
 PIPPENS, JAMES, Vienna.  
 PHILIPS, NOLA, Vienna.  
 PRICE, J. M., Vienna.  
 PHILLIPS, PAUL, Vienna.  
 PAULSON, J. E., Rossville.  
 PRINDLE, J. H., Chicago, 4301 Southwestern Blvd.  
 PLAUTT, M. S., Danville.  
 PASLEY, DONALD, Rossville, R. F. D. 2.  
 PRICE, ROBERT, Danville, 403 N. Vermilion St.  
 PRATHER, C. P., Rossville.  
 POTTER, E. W., Alvin.  
 PRILLMAN, G. H., Rossville.  
 PIDER, DORA, Flora.  
 PERISHO, C. EDWARD, Paris, 501 Greenview St.  
 PRESTON, SAM, Paris, R. F. D. 4.  
 PARKER, E. R., Dudley, R. F. D. 12.  
 A. A. PIPER & SONS, Paris.  
 PERKINS, J. O., Charleston.  
 PATTERSON, R. E., Charleston.  
 PUNDASACK, MRS. FRED, Pinckneyville.  
 PINCKNEYVILLE LUMBER CO., Pinckneyville.  
 PINCKNEYVILLE MILL CO., Pinckneyville.  
 PINCKNEYVILLE CRY. CO., Pinckneyville.  
 PILLERS, J. M., Pinckneyville.  
 PAXTON, C. S., Georgetown.  
 PLASTER, R. J., Chicago, 639 La-Salle St. Station.

## P

PETTIT, GAYLE, Danville, Red  
Spot Paint & Glass Co.

PETERSON, ALEX, State Food  
Inspector, Galesburg, 108 Madi-  
son St.

PUZEY, FAY, Sidell, R. F. D. 1.

PUZEY, RALPH, Sidell, R. F. D. 1.

PARKS, MRS. ROY, Stonefort.

PREMIUM DAIRY CO., Gales-  
burg.

## Q

QUINN, HENRY, Raleigh.

QUICK, J. W., Carrier Mills.

## R

RUMMELS, PETER F., Equality,  
R. F. D. 3.

REIGEL, DR. R. C., Harrisburg,  
R. F. D. 1.

ROBERTSON, MRS. J. C., Harris-  
burg, 512 E. Poplar St.

RISE, ALBERT, Harrisburg,  
R. F. D. 1.

REEL, J. M., Harrisburg.

RAGSDALE, T. H., Salatia.

REYNOLDS, J. M., Harrisburg,  
R. F. D. 1.

RIEGEL, ALLEN, Harrisburg,  
R. F. D. 1.

RIEVELY, R. L., Harrisburg.

RUMSEY, F., Eddyville, Pope Co.

RIEGEL, SOLLIE, Harrisburg,  
R. F. D. 1.

REED, E. W., Harrisburg, R. F. D.  
5.

RUSH, OSCAR, Joppa, Brakeman  
C. & E. I. Ry.

RILYING, EDWIN, Harrisburg,  
R. F. D. 2.

RANN, ROBERT, Mitchellsville.

RANDOLPH, SCOTT, Mitchell-  
ville.

RICH, FRANK, Harrisburg,  
R. F. D. 3.

RUSSELL, LUM, Harrisburg,  
R. F. D. 2.

RAGSDALE, RALPH, Galatia.

RISE, ASBY, Harrisburg.

RANDOLPH, HARRISON, Del-  
wood.

RENSHAW, H. C., Harrisburg,  
R. F. D. 4.

RYAN, JOSEPH, Galatia.

REYNOLDS, JUSTINE, Harris-  
burg, R. F. D. 1.

ROBERTS, HUGH, Harrisburg, 9  
W. Texas St.

ROBERTS BROTHERS, Harris-  
burg.

RUSSELL, B. D., Harrisburg,  
R. F. D. 2.

RUSSELL, W. O., Harrisburg,  
R. F. D. 1.

REIGEL, H. D., Harrisburg,  
R. F. D. 1.

RAWLINS, GENTRY, Harrisburg,  
205 N. Granger St.

RUSSELL, ALMON, Harrisburg,  
R. F. D. 2.

REIGEL, W. W., Harrisburg,  
R. F. D. 1.

RUSE, J. H., Harrisburg, 303 E.  
Poplar St.

RUSE, SILAS, Harrisburg, R. F. D.  
2.

RIEGEL, ETHEL, Harrisburg,  
R. F. D.

RANDOLPH, D. W., Mitchellsville.

REEVELY, MRS. HELEN, Harris-  
burg, 207 N. McKinley.

RISTER, J. C., Lawrenceville,  
R. F. D. 6.

RAPP, JOHN, Galatia, R. F. D.

RUSSELL, LORAL, Harrisburg,  
R. F. D. 2.

RHODES, JOHN, Harrisburg.

ROBERTSON, G. M., Eldorado.

RANN, AL., Harrisburg, R. F. D.  
2.

## R

- RUDEMENT, MEL REYNOLDS, Harrisburg, R. F. D. 1.  
 RAYMER, LUCIAN, Harrisburg, R. F. D. 3.  
 REES, W. D., Harrisburg, R. F. D. 3.  
 RIEGEL, ROY, Harrisburg, R. F. D. 1.  
 RODDEN, JOHN, Vienna, R. F. D.  
 RIDENHOWER, R. R., Vienna.  
 RILEY, THOS., Vienna.  
 ROBEY, E. P., Danville, 416 W. North St.  
 RED SPOT PAINT & GLASS CO., Danville.  
 RICHARDS, VERNON, Georgetown.  
 RAY, BEN, Rossville.  
 REECE, DR. D. C., Rossville.  
 ROSSVILLE CREAMERY CO., Rossville.  
 RAY, G. A., Rossville.  
 REINBOLD, F. C., Rossville.  
 ROBERTS, W. E., Alvin.  
 RHODE, C. F., University, Urbana, Div. Dairy Husbandry.  
 ROBERTSON, F. A., Flora, R. F. D. 3.  
 RAHEL, EARL, Paris.  
 RUDY & LAMB, Paris, West Side Square.  
 RUFF, DR. G. O., Paris, (Official).  
 ROSE, A. N., Charleston.  
 REYNOLDS, GEO., Charleston.  
 ROE, JOHN D., Pinckneyville.  
 V. RICE BROS., Dallas City.  
 ROSE, DR. P. W., Cyprus.  
 ROBERTS, ELMER E., Arcola, R. F. D. 2.  
 RIDGEFARM CREAMERY CO., Ridgefarm.  
 RAY, EARL, Danville, 302 Daniel Bldg.  
 ROOSCH, FRANK, Georgetown, R. F. D. 1.  
 RICHARDS, F. E., Olivet.  
 THE ROSSVILLE CREAMERY CO., Rossville.  
 RUEHE, PROF., Urbana.  
 RHYKERD, A. W., Cameron, R. F. D. 3.  
 RUEHE, HARRISON, A., Urbana, c. o. University.

## S

- SATCHEN, H. M., Heidelberg, Miss.  
 STEVENSON, HENRY, Harrisburg.  
 SPANGLER, F. M., Harrisburg, R. F. D. 1.  
 SUTCLIFF, ABE, Vienna.  
 SANDERS, FRANK, Vienna.  
 SANDERS, JOHN, Vienna.  
 SHINN, J. W., Vienna.  
 SHINN, RAY, Vienna.  
 SIMMONS, CAL, Vienna.  
 SHEETS, JESS, Bismark.  
 SMITH, EVERETT, Danville, R. F. D. 5.  
 SMITH, H. P., Detroit, Mich., Buhl Stamping Co.  
 IGNATZ SHULTZ CO., Chicago, 5201 Ingleside Ave.  
 SUTHERLAND PAPER CO., Kalamazoo, Mich.  
 SHAW, S. T., Cutler.  
 SMITH, T. P., Danville, 213 Orchard St.  
 SAFFORD, M. C., Danville, Sugar Creek Cry.  
 STRAUSS, RIES, Danville.  
 SATTERNHITE, M. B., Rossville.  
 SELLARS, WILLIAM, Rossville, R. F. D. 2.  
 SIMS, J. B., Hoopeston.  
 SASS, E. W., Hoopeston.  
 SMITH, E. C., Rossville.  
 SMITH, W. G., Alvin.  
 SNOW, CHAS. H., Bloomington.  
 SCHARFF, E. E., St. Louis, Mo., 7900 Michigan Ave.  
 SONGER, MRS. LILLIAN, Alvin.

## S

- SMITH, WARREN, Chicago, 61 West Kinzie St.
- SMITH, CHAS. T., Clay City.
- SNYDER, JOHN, Flora.
- SCUDAMORE BROS., Flora.
- SCHNEIDER, HENRY, Dudley, R. F. D. 12.
- SWANGO, CLARENCE, Paris, 513 South Central Ave.
- SMITH, C. A., Paris, 813 Marshall St.
- SHOLEM, SAM, Paris.
- SCHNEIDER, CHAS. FREDERICK, Dudley, R. F. D. 12.
- SMITH, JUSTIN, Paris, 713 Shaw Ave.
- SMITTKAMP, FRED, Paris, R. F. D. 3.
- SAYRE, PERRY, Chrisman.
- SHOAFF, W. P., Paris.
- SMITH, C. V., Paris, North Main Street.
- SMITH, CHARLES E., Dudley, R. F. D. 12.
- SEE, EUGENE, Paris, R. F. D. 4.
- SWANGO, JESSE H., Paris, R. F. D. 3.
- SWANGO, HARLAN A., Paris, R. F. D. 3.
- WALTER SIMS & SON, Paris.
- SMITH, SUSAN A., Dudley, R. F. D. 12.
- SMITH, C. D., Dudley, R. F. D. 12.
- SEE, LOREN, Paris, R. F. D. 4.
- SILVERSTEIN, S. S., Paris, South Central Ave.
- STEPHENS, RUSSELL, Paris, R. F. D. 4.
- SWANGO, FRED, Charlestown.
- SUDDUTH, JESSE R., Paris, R. F. D. 3.
- SHERER, ELLIS, Paris, R. F. D. 4.
- SWIGER, WILLIAM, Paris, R. F. D. 4.
- SMITH, H. T., Kansas, R. F. D. 14.
- SHARKEY, WILL, Paris, R. F. D. 5.
- SMALL, DEE, Marion, 905 E. Boulevard.
- SMITH, IRA, Harrisburg, R. F. D. 4.
- STEVENSON, RICHARD, Raleigh.
- SLOAN, R. O., Raleigh.
- STEWART, JOE, Carrier Mills.
- SISK, FANNIE, Harrisburg, R. F. D. 3.
- STEWART, W. T., Galatia.
- STEINSULTZ, HERMAN, Raleigh, R. F. D. 1.
- STRICKLIN, MRS. COLA, Harrisburg, R. F. D. 5.
- SPURLOCK, SAM, Eldorado.
- SUTTON, T. W., Eldorado, R. F. D. 1.
- SUTTON, FRANK, Eldorado, R. F. D. 1.
- SPENCER, DR. J. U., Harrisburg.
- SMITH, BERTIS, Harrisburg, R. F. D. 4.
- SUTTON, C. A., Harrisburg, R. F. D. 4.
- SMITH, W. P., Harrisburg, R. F. D. 3.
- SETEN, W. H., Equality.
- SMITH, F. C., Harrisburg.
- SETEN, DR. C. E., Harrisburg.
- SPURBECK, FRANK, Harrisburg, R. F. D. 3.
- SMALL, CURTIS, Harrisburg.
- STRICKLIN, G. W., Harrisburg Box 288.
- STOUT, W. A., Harrisburg.
- STOFFEL, CHAS., Campbell Hill.
- STRICKLIN, CLIFFORD, Harrisburg.
- STEWART, CLARK, Galatia, R. F. D. 2.
- SULLIVAN, CHAS. A., Harrisburg, 728 S. Ledford St.
- SULLIVAN, WILLIAM, Harrisburg, 502 S. McKinley.
- STATE ROAD DAIRY, Eldorado.
- SUTTON, W. M. C., Eldorado, R. F. D. 3.
- SANDERS, FRED, Harrisburg, R. F. D. 3.
- SADDLER, BRYANT, Harrisburg, R. F. D. 3.



## S

- SMITH, W. B., Eldorado.  
 SPURLOCK, H. C., Eldorado,  
 R. F. D. 1.  
 SWINNEY, M. W. C., Eldorado,  
 R. F. D. 3.  
 SHANAFELT, IKE E., Odin.  
 SMART, W. T., Galatia.  
 STRICKLIN, LEE, Harrisburg,  
 R. F. D. 5.  
 STAIGER, J. R., Harrisburg,  
 South Webster St.  
 SUTTON, SIMON, Harrisburg, 328  
 S. Main Street.  
 SMITH, A. L., Harrisburg.  
 SCHIEN, J. A., Auburn, R. F. D.  
 SHIRES, JOHN, Covington, Tenn.  
 SMITH, LOGAN, Ridgway,  
 R. F. D.  
 SIMMONS, EDWARD, Galatia,  
 R. F. D.  
 SHERROD, DAN, Harrisburg,  
 R. F. D. 3.  
 SHELDON, THEODORE, Harris-  
 burg, R. F. D. 3.  
 SCHMIDT, HENRY, Harrisburg,  
 R. F. D. 3.  
 STORY, ERNEST, Harrisburg,  
 R. F. D. 3.  
 SIMPSON, J. D., Vienna, R. F. D.  
 SMITH, EARL, Galatia.  
 SMALL, JOHN, Harrisburg, 132  
 W. College St.  
 SUMMERS, J. D., Harrisburg, 112  
 W. Raymond St.  
 STINSON, OSCAR, Eldorado.  
 SISK, JACK, Junction.  
 SNEED, GEORGE, Harrisburg,  
 R. F. D. 3.  
 STEVENS, ORVIL, Marion, 505  
 W. College St.  
 SOSENHEIMER, HENRY, Pinck-  
 neyville.  
 SCHOCH, JOHN, Pinckneyville.  
 SANDERS, GEORGE, Indianola.
- SPINNER, C. E., Mattoon, 1812  
 Maple Ave.  
 THE SWINNEY PRINTING CO.,  
 Ft. Branch, Ind.  
 SAULMON WILLIAM, Sidell,  
 R. F. D. 1.  
 SNYDER, P. W., Indianola.  
 SMITH, E. C., Vermilion Grove.  
 SCHEETER, KENNETH, George-  
 town, R. F. D. 1.  
 SANDUSKY, W. J., Georgetown,  
 R. F. D. 1.  
 SANDLIN, JOHN, Indianola.  
 SCHARFF KOKEN MFG. CO., St.  
 Louis, Mo., 7900 Michigan Ave.  
 SULLIVAN, JOSEPH P., Chicago,  
 2107 Canalport Ave.  
 SMITH, HAROLD S., Newton, Ia.,  
 Fieldman Am. Jersey Cattle  
 Club.  
 STOCKBERGER, D. D., Danville,  
 406 W. English.  
 THE SUTHERLAND PAPER CO.,  
 Kalamazoo, Mich.  
 SAALFELD, MR. DAVE, Chicago,  
 4026 N. Kedvale Ave.  
 SCHULTZ, IGNATZ, Chicago, 712  
 Federal St.  
 SANDUSKY, CLINT, Georgetown,  
 R. F. D. 1.  
 SMITH, S. P., Olivet, Box 47.  
 SOLAR STURGIS MFG. CO., Mel-  
 rose Park.  
 SPENCE, BYRON, Little Falls,  
 N. Y., Chr. Hansen Lab.  
 STOUTIN, G. H., Sidell.  
 SNOW, CHAS., Bloomington,  
 Snow & Palmer.  
 SMITH, H. B., Bardolph.  
 SIMMONS, HOWARD, Prairie  
 City.  
 SIMMONS, MARTHA, Prairie  
 City.

## T

- TATE, E. C., Galatia.  
 TATE, G. W., Galatia.  
 TATE, H. A., Galatia.  
 TAYLOR, W. L., Vienna.
- THOMPSON, ALBERT, Carrier  
 Mills.  
 THORNBERRY, ROY, Harrisburg,  
 R. F. D. 1.



## T

- TURNER, GEORGE, Carrier Mills,  
c. o. Phil Turner.
- TURNER, WALDO, Harrisburg.
- THOMPSON, ARTHUR, Harris-  
burg, R. F. D. 1.
- TRAVELSTEAD, LON, Harris-  
burg.
- TURNER, SAM, Equality.
- TRAVELSTEAD, WILL, Carrier  
Mills, R. F. D. 1.
- TRAVELSTEAD, IRVIN, Carrier  
Mills, R. F. D. 1.
- THOMAS, GLEN R., Eldorado,  
R. F. D. 1.
- TAYLOR, RAY, Vienna.
- TAYLOR, A. J., Vienna.
- THOMAS, O. G., Harrisburg,  
R. F. D. 4.
- TRAMMEL, T. F., Stonefort.
- THOMPSON, CHARLES H., Har-  
risburg.
- TRAVELSTEAD, JOE, Rudement.
- TABOR, JOHN, Carrier Mills.
- THAXTON, J. D., Eldorado,  
R. F. D. 1.
- TEACHENOR, F. A., Eldorado.
- THOMAS, A. D., Harrisburg,  
R. F. D. 5.
- TURNER, J. C., Eldorado.
- THOMAS, W. W., Pine Ridge,  
S. Dak.
- TAYLOR, OSCAR, Harrisburg,  
R. F. D. 1.
- TANNER, DOUGLAS, Carrier  
Mills.
- TUCKER, CHARLES L., Eldorado,  
R. F. D. 1.
- THOMAS, ELBERT, Ledford.
- THOMPSON, PERRY, Harrisburg,  
129 W. Raymond St.
- THOMPSON, L. A., Harrisburg,  
R. F. D. 2.
- THOMPSON, EZRA, Harrisburg,  
R. F. D. 2.
- THOMPSON, W. H., Harrisburg,  
So. Main St.
- TYLER, F. A., Harrisburg, So.  
Jackson St.
- THOMAS, W. E., Harrisburg.
- TANNER, HARVEY, Harrisburg,  
R. F. D. 2.
- TURNER, CLARICE, Harrisburg,  
R. F. D. 2 Box 117.
- TAYLOR, C. A., Harrisburg.
- TAYLOR, HARRY, Harrisburg.
- TUCKER, GEORGE, Harrisburg,  
R. F. D. 3.
- THREAT, OTIS, Harrisburg,  
R. F. D. 3.
- THOMPSON, LEWIS, Harrisburg,  
R. F. D. 2.
- THOMAS, H., Earlville.
- THOMPSON, GEORGE W., Har-  
risburg, R. F. D. 3.
- TAYLOR, ROBERT, W., Harris-  
burg, R. F. D. 3.
- TATE, GEORGE, Harrisburg,  
R. F. D. 2.
- TURNER, LON, Harrisburg,  
R. F. D. 1.
- TEMPLE, HERMAN, Harrisburg,  
R. F. D. 1.
- TRAVIS, M. G., Heidelberg, Miss.
- TRAVIS, G. B., Heidelberg, Miss.
- TOLER, DOLPH, Vienna.
- TINSLEY, JOHN, Belkamp.
- THOMAS, ORVILLE E., West-  
ville, R. F. D. 1.
- TEEGARDEN, MRS. MAY, Ft.  
Thomas, Ky., 102 Rossford Ave.
- THORNSBORO, OLLIE, Alvin.
- TAYLOR, J. R., Vienna.
- TURNER, FRANK, Paris, 907 N.  
Central Ave.
- TURNER, JOE, Ingraham.
- TICHENOR, E. O., Rardin.
- TAGUE, W. H., Marion, 614 S.  
Calumet.
- TEMPLETON, DR. J. S., Pinck-  
neyville.
- THIMMIG, THOS. H., Pinckney-  
ville.
- TEMPLETON, J. F., Pinckney-  
ville.
- THOMAS, CHARLES C., George-  
town, R. F. D. 1.
- TAYLOR, BEE, Indianola, R. F. D.  
1.

## T

TELLING, J. W., Danville, 1215  
N. Walnut Ave.

H. D. K. THOMAS & SONS, Clin-  
ton.

## U

UPTON, JOHN, Harrisburg,  
R. F. D. 1.

UPCHURCH, G. W., Harrisburg.

UPCHURCH, J. C., Harrisburg,  
600 S. Granger St.

UNGER, W. E., Knoxville.

## V

VINEYARD, JOHN, Harrisburg,  
R. F. D. 5.

VANMETER, CHARLES, Carrier  
Mills.

VANNIS, LOUIS, Harrisburg,  
R. F. D. 1.

VINEYARD, CHARLES F., Har-  
risburg, R. F. D. 1.

VANDEVORD, HENRY, Harco.

VAUGHAN, ALVIN, Harrisburg,  
R. F. D. 2.

VEACH, W. A., Vienna.

VINYARD, J. K., Harrisburg,  
R. F. D. 3.

VAN KWEN, S. J., Cedar Rapids,  
Iowa, J. G. Cherry Co.

VAHLOS, PETER, Paris.

VALENTINE, A. D., Pinckney-  
ville.

VAN KUREN, S. J., c. o. J. G.  
Cherry, Cedar Rapids, Iowa.

## W

WASSON, ROBERT, Harrisburg,  
R. F. D. 3.

WHALEY, G. E., Assumption.

WALLACE, LUCIAN, Harrisburg,  
R. F. D. 3.

WISE, WICK, Harrisburg, R. F. D.  
4.

WISE, JAMES, Harrisburg,  
R. F. D. 4.

WALLACE, T. T., Harrisburg,  
R. F. D. 3.

WALKER, W. P., Vienna.

WHITESIDES, FRANK, Vienna.

WHITESIDES, SHERMAN, Vien-  
na.

WHITESIDES, CHARLEY, Vien-  
na.

WALLS, C. W., Harrisburg,  
R. F. D. 4.

WEBSTER GROCER CO., Dan-  
ville.

WILBER, C. G., Rossville.

WINKLER, W. E., St. Louis, Mo.

WALTER, C. V., Danville, 604  
Sherman St.

WILLIAMSON, H. B., Alvin.

WILBUR, E. D., Waukegan.

WARNER, P. M., Rossville.

WHITEFORD, MISS INA, Flora.

WALKER, F. J., Flora.

WENZELMANN BROS. CHEMI-  
CAL WORKS, Galesburg.

WRIGHT, BERNARD, Paris,  
R. F. D. 3.

WILLIAMS, CHARLES, Paris,  
R. F. D. 3.

WILSON, CHARLEY, Paris,  
R. F. D. 3.

WARSMOUTH, ED., Chrisman.

WILSON, WILLIAM, Paris,  
R. F. D. 3.

WOLFE, LEN, Paris.

WALLS, E. E., Paris, R. F. D. 3.

WILSON, T. M., Paris, R. F. D. 4.

WALLAGE, D. E., Paris, 311 Par-  
rish St.

## W

- WRIGHT, G. B., Paris.  
 WILEY, GEORGE, Bushton.  
 WHITE, ROY F., Marion, 505 E. Boulevard.  
 WOOSLEY BROTHERS, Pinckneyville.  
 WILSON, MRS. ELSIE S., Pinckneyville.  
 WEST, CLARENCE H., Albion, R. 2.  
 WELLS, JOE M., Eldorado, R. 3.  
 WILLIAMS, I. B., Sidell.  
 WHITE, RALPH, Georgetown, R. F. D. 1.  
 WILLIAMS, JOHN, Sidell, R. F. D. 1.  
 WHITE, JAMES L., Georgetown, R. F. D. 1.  
 WRIGHT, K. E., Urbana, University of Ill.  
 WARTERS, HAROLD, Sidell.  
 WARD, F. W., Sidell, R. F. D. 1.  
 WILLISON, H. J., Ridgefarm.  
 WILSON BROS., Carrier Mills.  
 WHEELER, C. A. D., McLeansboro, R. F. D. 6.  
 WHITLOCK, G. E., Eldorado.  
 WHITE, J. E., Harrisburg, 406 McIlrath St.  
 WILSON, INEZ, Harrisburg, Box 78.  
 WILEY, E. J., Springfield, 427 Vine St. (J. B. Ford Co.)  
 WEBBER, GEORGE, Galatia.  
 WISE, GROVER, Harrisburg, R. F. D. 4.  
 WASSON, L. A., Harrisburg, c. o. Wasson Coal Co.  
 WOOLEY, LAFE, Equality.  
 WATHEN, CECIL, Equality.  
 WARD, EVERETT, Carrier Mills, R. F. D. 2.  
 WALDEN, CHARLES, Harrisburg.  
 WASSON BROS., Harrisburg, R. F. D. 3.  
 WARD, BERT, Carrier Mills, R. F. D. 2.  
 WOMACK, J. A., Equality.  
 WILSON, STANLEY, Harrisburg.
- WROTEN, C. J., Carrier Mills, R. F. D. 1.  
 WISE, S. D., Eldorado.  
 WEISS, BEN, Eldorado.  
 WOODS, C. L., Harrisburg.  
 WENDLING, W. F., Harrisburg, 112 W. Locust St.  
 WEBB, ISAAC, Mitchellsville.  
 WESLEY, C. H., Raleigh.  
 WEAVER, EARL, Harrisburg, R. F. D. 5.  
 WILLIAM, CHARLES F., Raleigh.  
 WASSON, C. M., Harrisburg.  
 WILEY, W. I., Harrisburg.  
 WILSON, DELMAR, Harrisburg, R. F. D. 3.  
 WEAVER, H. L., Harrisburg, R. F. D. 5.  
 WHEATLEY, W. W., Harrisburg.  
 WHITCHURCH, HARRY, Centralia, R. F. D.  
 WALLACE, WILLIAM, Rudement.  
 WORGEL, VALENTINE, Equality.  
 WALLS, WILLIAM, Harrisburg, R. F. D. 4.  
 WALLS, ORAL, Harrisburg, R. F. D. 4.  
 WARREN, HICK, Carrier Mills, R. F. D. 2.  
 WHITE, ISAAC, Equality.  
 WALLACE, E. A., Rudement.  
 WALLACE, ARTHUR, Oak.  
 WALLACE, G. L., Rudement.  
 WRISTON, W. E., Rudement.  
 WELCH, WILLIAM, Harrisburg.  
 WEBB, GEORGE, Mitchellsville.  
 WEAVER, ELES, Harrisburg.  
 WASSON, A. J., Golconda, R. F. D. 1.  
 WILSON, J. F., Harrisburg, Box 323.  
 WINTIZER, ARTHUR, Harrisburg, R. F. D. 4.  
 WILMOTH, JOE, Harrisburg, R. F. D. 1.  
 WIEDEMANN, C. J., Harrisburg, R. F. D. 3.

## W

WEBBER, ARTHUR, Galatia.  
WEBBER, C. C., Galatia.  
WALLACE, A. J., Rudement.  
WINTIZER, BEN, Harrisburg,  
R. F. D. 4.  
WALLS, LAWRENCE, Harris-  
burg, R. F. D. 4.  
WEIR, J. W., Galatia.  
WREN, ARCH, Junction.

WISE, JAMES, Harrisburg,  
R. F. D. 3.  
WOMACK, D. O., Harrisburg,  
R. F. D. 3.  
WHEATLEY, J. T., Harrisburg,  
320 West Church St.  
WOLFE, HENRY, Harrisburg,  
R. F. D. 3.  
WHITLOCK, T. E., Harrisburg,  
R. F. D. 5.

## Y

YOUNGER, SCOTT, Harrisburg,  
R. F. D. 3.  
YOUNG, CHARLES, Harrisburg,  
R. F. D. 4.  
YOUNGS, N. C., Harrisburg, 712  
N. Main St.  
YOUNGINGER, JOHN, Harris-  
burg, 1024 W. Barnett St.  
YEOMANS & SHEDD HDWE.  
CO., Danville, 20-30 W. Main St.

YEAZEL, ELLEN, Alvin.  
YEAZEL, F. E., Alvin.  
YONTZ, ROBERT, Paris.  
YOUNG, CHARLES, Pinckney-  
ville, R. 4, Box 33.  
YAPP, W. W., Urbana, Univer-  
sity of Ill.  
YOERG, HENRY, Chicago, 901  
Wellington St.

## Z

ZINN, W. B., Junction.  
ZVARA, AUGUST, Harrisburg.

ZIMMER, MATHEW, Harrisburg.  
ZAHN, A. H., Pinckneyville.

## MINERALS FOR DAIRY COWS

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No question is probably discussed more frequently by farmers at the present time than the mineral requirements of livestock and especially of dairy cows. This whole general question is discussed in detail in Wisconsin Bulletin 350, **Minerals for Livestock**. For convenience and ready reference this statement concerning the mineral needs of dairy cows has been prepared.

### **Always Supply Plenty of Common Salt**

Dairy cows must have plenty of salt in order to thrive. Allow them to have free access to salt or feed it to them in their feed. Many dairymen mix 0.5 to 1 lb. of salt with 100 lbs. of concentrate mixture or grain mixture, and then supply salt in addition so the cows can take what they wish. (See Bulletin 350, Page 3.)

Salt is cheap. Don't neglect supplying it.

### **Guard Against Goiter**

If trouble has been experienced from goiter or "big neck" in calves, this may be prevented in the future by giving potassium or sodium iodide to the cows through the gestation period. Where there is no trouble from goiter this treatment is not needed. (For a full discussion and method of treatment see Bulletin 350, Pages 4 to 10.)

### **Cows Need Plenty of Calcium (Lime) and Phosphorus**

Milk is very rich in both calcium (lime) and phosphorus. Therefore, dairy cows must receive liberal supplies of both these minerals to make possible continued



high production and to have thrifty offspring. In the usual dairy rations there is more danger of a lack of calcium than there is in phosphorus. This is because the protein-rich feeds most common in Wisconsin are also rich in phosphorus. This includes wheat bran in particular and also wheat middlings, cottonseed meal, and linseed meal. Gluten feed, germ oil meal (corn germ meal), brewers' grains and distillers' grains are not especially high in phosphorus.

When 20 per cent or more of the concentrate mixture or grain mixture consists of wheat bran, wheat middlings, linseed meal, or cottonseed meal, the cows will get plenty of phosphorus. If less of these high-phosphorus feeds is fed, it is best to supply additional phosphorus by adding bone meal, as stated later.

### **Calcium is Important**

A large production of milk and thrifty calves are an impossibility if there is a lack of calcium in the ration. The best way of furnishing plenty of lime is to grow and feed an abundance of alfalfa, clover, or soybean hay whenever it is possible. All legume hays are rich in lime. Furthermore, well-cured, green colored hay, cured in the sun, contains a vitamine which animals need to enable them to assimilate and use the calcium in their feed.

If poor roughage must be used, such as hay from the grasses (not legumes) corn stover grown on acid soil, or straw, add 3 to 4 lbs. of ground limestone, wood ashes, or dried marl to each 100 lbs. of concentrate or grain mixture. Preliminary experiments indicate that ordinary Wisconsin limestones, which are nearly all dolomitic (high in magnesium), may be used satisfactorily as a source of lime.

If there is not 20 per cent of high-phosphorus feeds in the concentrate mixture (wheat bran, wheat middlings, linseed meal, and cottonseed meal), it is best to use 3 to 4 lbs. of bone meal or spent bone black with each 100 lbs. of the concentrate mixture, instead of using the limestone, wood ashes, or marl. Bone meal and spent bone black

supply both calcium and phosphorus, while limestone, wood ashes, and marl furnish lime, but practically no phosphorus.

If plenty of alfalfa, clover, soybean or other legume hay is fed, then there may possibly be no advantage in adding a calcium-rich mineral supplement to the ration. However, even with legume hay available for winter feeding, it can do no harm and may do considerable good to add one of these lime carriers to the ration.

### **Feed Calcium Supplements on Pasture**

Fresh, green crops contain an especially large amount of vitamin needed to enable animals to assimilate calcium. Therefore, the best way of replenishing the calcium in the cow's body, which may have been seriously depleted by high milk production during the winter feeding period, is to feed a calcium-supplement when she is on pasture. Therefore, it is especially important to mix one of the calcium-rich supplements with the concentrate mixture fed to cows on pasture. It is probably best to use more of the calcium-supplement than for winter feeding. As much as 4 to 5 lbs. of one of the calcium-supplements may be mixed with each 100 lbs. of concentrate mixture. If this mixture should not be very palatable to the cows, the allowance of the mineral supplement may be reduced somewhat.

When the cows are not fed any concentrates during a part of the pasture season, the calcium-supplement may be mixed with salt and the cows allowed free access to it. A mixture of  $1/8$  salt by weight and  $7/8$  limestone, wood ashes, marl, or bone meal may be used for this purpose.

### **What About Commercial Mineral Mixtures?**

It is entirely unnecessary to buy expensive commercial mineral mixtures. Just as good results can be secured by following the simple recommendations on these pages.

## DAIRY SIRE'S DAUGHTERS BEST INDEX OF HIS VALUE

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A great dairy sire is one whose daughters have a high average yield of milk and butterfat, a high average increase in milk and butterfat yield over that of their dams, and a high percentage of their number better than their dams. All these things must be taken into consideration when measuring the value of a dairy sire. No one of them alone offers sufficient evidence of the sire's worth.

In a study of 23 Holstein-Friesian sires, each having six or more tested daughters from tested dams, some conclusions were arrived at concerning the hereditary transmission of production. Some of the sires in the list raised both the milk yield and the percentage of butterfat of their daughters as compared to the production of their dams. Some raised one and lowered the other. Some lowered both. But no one sire raised both the milk and butterfat percentage of all his daughters, nor did any one sire lower these records of all his daughters. In other words, while the sires evidenced a prepotency for raising or lowering production, no one sire was completely prepotent.

The ability of a sire to raise or lower the yield of his daughters does not necessarily have a correlation with the record of his own dam. Rather, the prepotency of a sire seems to depend upon the combination of factors governing the yield of milk and percentage of butterfat that he has inherited from his parents. If he has inherited only factors that will determine high milk yield and high percentage of butterfat, he will be prepotent in impressing these characters on his offspring. If he and the dams with which he is mated have inherited from their parents a mixture of the factors for both low and high production which is often the case, a variety of combinations in the different offspring

will follow, and they will be of varying degrees of producing ability.

The evidence seems to point to both parents contributing equally to the inheritance governing the milk and butterfat producing capacity of their daughter's. But if one parent is homozygous or pure for the hereditary factors determining high production and the other parent is heterozygous, or mixed, in its inheritance, then the homozygous parent will have the greater influence on the producing capacity of the daughter; yet this daughter will transmit to a part of her progeny the inheritance for low production that she may receive from her heterozygous parent. From two heterozygous parents, it is to be expected that the daughters will show a great range in producing capacity from very poor to very good.

The fact that the percentage of butterfat and the milk yield are inherited independently, at least within limits, and that both the sire and the dam contribute to the inheritance of their daughters, governing both milk yield and percentage of butterfat, indicates that improvement in yield of butterfat can be brought about by selection for both milk yield and percentage of butterfat.

The big problem seems to be to locate the sire that has inherited only the factors determining a high producing capacity. The degree to which he has inherited these factors can be determined only by testing a large number of his daughters and comparing their records with those of their dams.

The increasing number of records of daughters and their dams becoming available through the cow-testing associations furnishes a means of calculating the comparative worth of a greater number of sires than has been possible in the past. The 23 sires in this study were given comparative rankings in a new method devised by Mr. Graves. Each sire was ranked in comparison with the others with respect to milk yield of his daughters, average butterfat yield, average increase of milk yield, average increase of butterfat, and the percentage of daughters that were better than their dams in milk and butterfat yield. His comparative value

was indicated by the sum of his rankings in the various classes.

For instance sire E ranked first in average milk yield of daughters, third in average butterfat yield, fifth in average increase of milk, fifth in average increase of butterfat, first in percentage of daughters making increase in milk, and first in percentage of daughters making increase in butterfat. The sum of these rankings is 16, which, being the smallest ranking number, places him at the head of the list.

On the other hand, sire V, at the bottom of the list of sires, ranked nineteenth, twentieth, twenty-third, twenty-second, seventeenth, and sixteenth respectively in these same classes, giving him a total ranking of 117, or more than any other sire in the list.

The complete discussion of this study has been published in Department Bulletin No. 1372, just issued. A copy may be obtained, while the supply lasts, by writing to the United States Department of Agriculture, Washington, D. C.









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